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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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Gapop 10.0 , Gapext 0.5
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1: /SIDS2/gcgdata/c
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JSIDS2/gcgdata/geneseq/geneseqp-emb1/AA199.DAT: *
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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Result	Score	Query Match	Query Match Length DB		ID	Description
ъ	104	100.0	16	20	AAY24158	Alpha-conotoxin pe
N	99	95.2	16	20	AAY24163	Alpha-conotoxin pe
ω	99	95.2	16	20	AAY24164	
4	99	95.2	16	23	AAM50844	Conus pennaceus Tr
5	95	91.3	56	21	AAB21454	Cone snail alpha-c
6	94	90.4	16	20	AAY24159	Alpha-conotoxin pe
7	91	87.5	56	21	AAB21455	Cone snail alpha-c
œ	83	79.8	56	21	AAB21615	Cone snail alpha-c
9	80	76.9	56	21	AAB21430	Cone snail alpha-c
10	80	76.9	59	21	AAB21463	Cone snail alpha-c

14 44 44 44 44 44 44 44 44 44	11 12 13 14 15 16 17
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AAV21416 AAB21598 AAB21508 AAB21440 AAB21450 AAB21450 AAB21575 AAW24881 AAW12736 AAB21577 AAB21577 AAB21471 AAY24162 AAW24162 AAW21613 AAW21613 AAW21613 AAW21613 AAW2161605 AAW21605 AAW21428 AAW21448 AAW21459	AAB21620 AAB21459 AAR75274 AAB21609 AAB21435 AAW24901 AAW24901 AAW24160 AAW89493
Alpha-conotoxin pe Cone snail alpha-c Predatory cone snail alpha-c	Cone snail alpha-c Cone snail alpha-c A-lineage conotoxi Cone snail alpha-c Cone snail alpha-c C. bandanus alpha- Alpha-conotoxin pe Conopeptide AuIA.

ALIGNMENTS

DR XX	PΙ	X	PA	××	PR	PR	XX	ΡF	XX	PD	×	ΡN	XX	SO	SO	Χ×	ΧW	×Σ	ΚW	ΚW	ΚW	XX	DE	X	DT	X	AC	×	ID	AAY24158	PESTIT 7 1
WPI; 1999-405367/34.	Cartier GE, Luo S, McIntosh JM, Olivera BM, Yoshikami D;		(UTAH) UNIV UTAH RES FOUND.					23-DEC-1998; 98WO-US27367.		08-JUL-1999.		WO9933482-A1.		Synthetic.	Conus purpurascens.		seasonal effective disorder.	bipolar disorder; unipolar depression; dysthymia;	gastric motility disorder; urinary incontinence; mood disorder;	small cell lung carcinoma; cardiovascular disorder; nicotine addiction;	Alpha-conotoxin; neuronal nicotinic acetylcholine receptor; nAChR;		Alpha-conotoxin peptide SEQ ID NO:10.		10-SEP-1999 (first entry)		AAY24158;		AAY24158 standard; peptide; 16 AA.	4158	T.W. J

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RESULT 2
AAY24163
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The present sequence represents a
                               Claim
                                                          at neuronal nicotinic
                                                                                                       WPI; 1999-405367/34.
                                                                                                                                                                                               03-APR-1998;
31-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                             gastric motility disorder; urinary incontinence; mood disorder;
bipolar disorder; unipolar depression; dysthymia;
                                                                                                                                                                                                                                                                                                                                                                                                      Alpha-conotoxin; neuronal nicotinic acetylcholine receptor; nAChR; small cell lung carcinoma; cardiovascular disorder; nicotine addic
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                                                                         Alpha-conotoxin peptides that
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           receptor containing a alpha beta subunit interface, reother subunits may be present in the receptor complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alpha-conotoxin peptides that are used to treat disorders regulated at neuronal nicotinic acetylcholine receptors
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                                                                                                                                                                                                                                                                                                                                    purpurascens.
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                             Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Page 27; 40pp; English
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                                                                                                                                                                   UTAH RES FOUND
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                                                                                                                                    Luo S,
                               6,
                                                                                                                                                                                            97US-0070153
                                                                                                                                                                                                              98US-0080588
                                                                                                                                                                                                                                            98WO-US27367
                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide SEQ ID NO:9.
                             40pp;
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                                                          acetylcholine
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Pred. No. 3.2e-06;
; Mismatches 0;
                                                                         used
                                                                                                                                    Olivera BM,
                                                          receptors
                                                                        to treat
                                                                                                                                                                                                                                                                                                                                                                           dysthymia;
                                                                      disorders regulated
                                                                                                                                    Yoshikami
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                                                                                                                                                                                                                                                                                                                                                                                                         addiction;
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specifically claimed

example

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disorders regulated at neuronal nAChR, especially alpha 3 beta alpha 3 beta 4 or alpha 7-containing nAChR. Disorders that can treated include cardiovascular disorders, a gastric motility d

incontinence, nicotine addiction, a mood disorder or small cell

are useful for preparing a pharmaceutical composition

for

treating

alpha-conotoxins

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Best Local
                                                                    The present sequence represents a specifically claimed example of alpha-conotoxin, which can be used to treat disorders regulated a neuronal nicotinic acetylcholine receptors (nAChR). The alpha-con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alpha-conotoxin; neuronal nicotinic acetylcholine receptor; nAChR; small cell lung carcinoma; cardiovascular disorder; nicotine addiction; gastric motility disorder; urinary incontinence; mood disorder;
                                                                                                                                        Claim 28;
                                                                                                                                                                                   Alpha-conotoxin peptides that are used to treat
                                                                                                                                                                                                                                                  Cartier
                                                                                                                                                                                                                                                                                                              03-APR-1998;
31-DEC-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conus purpurascens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gastric motility disorder; urinary inco
bipolar disorder; unipolar depression;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY24164 standard; peptide;
                                                                                                                                                                                                                                                                                (UTAH ) UNIV UTAH RES FOUND
                                                                                                                                                                                                                                                                                                                                                            23-DEC-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  alpha 3 beta 4 or alpha 7-containing nAChR. Disorders that can be treated include cardiovascular disorders, a gastric motility disorder, urinary incontinence, nicotine addiction, a mood disorder or small cell lung cardinoma. Mood disorders include bipolar disorder, unipolar depression, dysthymia and seasonal effective disorder. The alphaconotoxins can also be used for diagnosis of small cell lung cardinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                are useful for preparing a pharmaceutical composition for disorders regulated at neuronal nAChR, especially alpha 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              alpha-conotoxin, which can be used to treat disorders regulated at neuronal nicotinic acetylcholine receptors (nAChR). The alpha-conotoxins
                                                                                                                                                                  neuronal nicotinic acetylcholine receptors
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                                                                                                                                     Page 6; 40pp; English.
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97US-0070153.
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93.8%;
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Pred. No.
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                                                                                                                                                                                 disorders regulated
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                                                                                                                                                                                                                                                                                                                                                                            WPI;
                                                                                                                                                                                                                                                                                                   Screening for a neurotrophic factor mimetic, useful for treating, cancer and Alzheimer's, comprises combining a candidate mimetic \mathbf{w} fragment of a tyrosine kinase protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neurotrophic factor; NTF; mimetic; Huntington's disease; Parkinson's disease; Alzheimer's disease; amyotrophic lateral sclerosis; neurodegenerative disease; cancer;
             (receptor tyrosine kinase) protein, and of modulating the activity of a Trk protein. The invention concerns Trks and their ligands that modulate cell growth, differentiation and survival Trk proteins are known to mediate the activities of neurotrophins and are also known proto-oncogenes. Methods are claimed for screening for small molecule neurotrophic factor minetics capable of binding to a Trk protein or of modulating the binding of a neurotrophin to a Trk protein. Also claimed are medicaments comprising the present cyclic peptide for treatment of cancer or neurodegenerative disease selected from Huntington's disease,
                                                                                                                                                                                       The present sequence is that of a naturally-occurring cyclic peptide from the tropical snail Conus pennaceus shell. The peptide is capable of modulating the binding of a neurotrophin to a Trk
                                                                                                                                                                                                                                                                  Claim 16; Page 10; 107pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                Bates AT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conus pennaceus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cytostatic; therapy; cyclic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    neuroprotective; nootropic; anticonvulsant; antiparkinsonian;
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Parkinson's disease, Alzheimer's disease and amyotrophic lateral
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            carcinoma. Mood disorders include bipolar disorder, unipolar
                                                                                                                                                                                                                                                                                                                                                                            2002-179638/23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-215778P
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93.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 99; DB 20;
Pred. No. 1.3e-05;
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δÃ

1 GCCSLPPCALNNPDYC

Matches Query Match Best Local

14;

Conservative

Similarity

91.3%;

Pred. Score 95;

0

ВG .00011; 21;

Length

Mismatches No.

Indels

0

Gaps

0

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                                                                                                                                                 The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone small. These peptides are found in minute quantities in the venom of the smalls, and are targeted at the neuronal nicotinic acetylcholine receptors of the nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic acetylcholine receptors, including cardiovascular disorders, gastric acetylcholine receptors, including cardiovascular disorders, gastric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder; neuronal nicotinic acetylcholine receptor; cardiovascular disorder; gastric motility disorder; urlnary incontinence; nicotine addiction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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                                                        motility disorders, urinary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and seasonal affective disorder, and small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 39; Page 40; 229pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAA89429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-505965/45
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JAN-1999;
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Sequence
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   AA;
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93.8%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     blocking agents for use in surgery and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      disorder;
addiction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RM
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GCCSHPPCAMNNPDYC

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RESULT 6
AAY24159
ID AAY2
XX AAY2
XX AAP2
XX AAP2
XX ALPP
XX ALPP
XX BABR
KW Small
KW Small
KW Seass
XX Conu
OS Synt
KW Seass
XX Conu
OS Synt
FP 03-1
XX 03-1
PF 31-1
XX 03-1
PF 31-1
XX 03-1
PF 23-1
XX 03-1
PF 23-1
XX 03-1
PF 31-1
CC 0The
CC Tec
CC The
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CC
                                                                                                                                                                В
                                                                                                                                                                                                                     QY
                                 AAB21455
   ij
                                                                      RESULT 7
                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                              Matches
AAB21455 standard; Protein; 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                           on the nAChR. The alpha-conotoxin has the ability to potently block any receptor containing a alpha beta subunit interface, regardless of what other subunits may be present in the receptor complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cell lung carcinoma. The alpha-conotoxin antagonists are able to discriminate between non-symmetrical ligand binding interfaces pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gastric motility disorder, urinary incontinence, nicotine addiction, a mood disorder or small cell lung carcinoma. Mood disorders include bipolar disorder, unipolar depression, dysthymia and seasonal effective disorder. The alpha-conotoxins can also be used for diagnosis of small
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present sequence represents a specifically claimed example of an alpha conotoxin from the general formula given in AAY2415, which can be used to treat disorders regulated at neuronal nicotinic acetylcholine receptors (nAChR). The alpha-conotoxins are useful for preparing a pharmaceutical composition for treating disorders regulated at neuronal nAChR, especially alpha 3 beta 2, alpha 3 beta 4 or alpha 7-containing nAChR. Disorders that can be treated include cardiovascular disorders, a natural section of the cardiovascular disorders.
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                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alpha-conotoxin peptides that are used to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cartier GE,
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31-DEC-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       neuronal nicotinic acetylcholine receptors
                                                                                                                                                                                                                            GCCSLPPCALNNPDYC 16
                                                                                                                                                         GCCSLPPCAASNPDYC
                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 27; 40pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                       16
                                                                                                                                                                                                                                                                                           Conservative
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97US-0070153
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                                                                                                                                                                                                                                                                                                                      90.4%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    McIntosh JM, Olivera BM,
                                                                                                                                                                                                                                                                                                                  Score
Pred.
   A
                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                  No .
                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                    DB 20;
                                                                                                                                                                                                                                                                                                                      2e-05;
                                                                                                                                                                                                                                                                                                                                                    Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     disorders regulated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yoshikami
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                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                 0;
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Qy

0

neuronal nicotinic acetylcholine receptor; cardiovascular gastric motility disorder; urinary incontinence; nicotine

addiction;

Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder; neuronal nicotinic acetylcholine receptor; cardiovascular disorder;

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RESULT 8
AAB21615
XXX DT XXX
                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snail. These peptides are found in minute quantities in the venom of the snails, and are targeted at the neuronal nicotthic acetylcholine receptors of the nervous system. They usually contain two disaliphide bonds, which give the nervous system. They usually contain two disaliphide bonds, which give
                                                    Cone snail alpha-conotoxin SEQ ID NO:
                                                                                                                                             AAB21615 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                              acetylcholine receptors, including cardiovascular disorders, gastric motility disorders, urinary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and
                                                                                                                                                                                                                                                                                                                                                                                                                        them defined conformations, a rarity in molecules this small. The alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    alpha-conotoxin polypeptides derived from the venom of cone snails useful e.g. as neuromuscular blocking agents for use in surgery and treating unipolar depression - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder; neuronal nicotinic acetylcholine receptor; cardiovascular disorder; gastric motility disorder; urinary incontinence; nicotine addiction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 39; Page 40; 229pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conus pennaceus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Watkins M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200044776-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cone snail alpha-conotoxin SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-JAN-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB21455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (COGN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UTAH ) UNIV UTAH RES FOUND
                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                1 GCCSLPPCALNNPDYC 16
                                                                                                                                                                                                                      GCCSHPPCFLNNPDYC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000-505965/45.
DB; AAA89430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cell lung carcinoma
                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COGNETIX INC.
                                                                                                                                                                                                                                                                                                                                                                  affective disorder, and small cell lung carcinoma
                                                                                                                                                                                                                                                                                                                                        56 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Olivera
                                                                                                                                                                                                                                                                             Conservative
                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US01979
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0118381
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                                                                                                                                                                                                                                                                                          87.5%;
                                                                                                                                                                                                                     55
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                                                                                                                                             56
                                                                                                                                                                                                                                                                         Score 91; DB ZI; Pred. No. 0.00035;
                                                       358
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                                                                                                                                                                                                                                                                                                      Length 56;
                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jones
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                                                                                                                                                                                                                                                                          Gaps
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RESULT 9
AAB21430
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                            nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic and for treating disorders regulated at the neuronal nicotinic activities are compared to the receptors, including cardiovascular disorders, gastric metality disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             motility disorders, urinary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and seasonal affective disorder, and small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                             The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snail. These peptides are found in minute quantities in the venom of the snails, and are targeted at the neuronal nicotinic acetylcholine receptors of the
                                             WO200044776-A1
                                                                Conus textile.
                                                                                           gastric motility disorder; urinary incontinence; nicotine
                                                                                                    neuronal nicotinic acetylcholine receptor;
                                                                                                              Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder;
                                                                                                                                 Cone snail alpha-conotoxin SEQ ID NO:
                                                                                                                                                    19-JAN-2001
                                                                                                                                                                       AAB21430;
                                                                                                                                                                                        AAB21430 standard; Protein;
                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 39; Page 61; 229pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Watkins M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (COGN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UTAH ) UNIV UTAH RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-JAN-2000; 2000WO-US01979
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conus obscurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             small cell lung
        28-JAN-2000; 2000WO-US01979
                           03-AUG-2000
                                                                                                                                                                                                                                        40 GCCSHPPCAQNNQDYC 55
                                                                                                                                                                                                                                                      GCCSLPPCALNNPDYC 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000-505965/45.
                                                                                                                                                                                                                                                                            l Similarity
13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAA89511.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COGNETIX INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Olivera BM,
                                                                                                                                                                                                                                                                                                                 56 AA;
                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0118381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               carcinoma
                                                                                                                                                                                                                                                                                      79.8%;
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                                                                                                                                                                                          56
                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                            Score 83; DB Pred. No. 0.00 0; Mismatches
                                                                                                                                                                                          ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DR,
                                                                                                                                 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  McIntosh
                                                                                                                                                                                                                                                                                      DB 21;
0.0032;
                                                                                                                                                                                                                                                                                             21;
                                                                                                     cardiovascular disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  venom of cone snails
                                                                                                                                                                                                                                                                             <u>ω</u>
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                                                                                                                                                                                                                                                                                              Length 56
                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        in surgery and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jones
                                                                                            addiction
                                                                                                                                                                                                                                                                            0;
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                                                                                                                                                                                                                                                                                              RESULT 10
AAB21463
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Matches
                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim
                                                                                                                                                             Conus dalli.
                                                                                                                                                                                                                                                 19-JAN-2001
                                                                                                                                                                                                                                                                    AAB21463;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; AAA89405
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-JAN-1999;
          N-PSDB; AAA89438
                   WPI; 2000-505965/45
                                    Watkins M,
                                                                                  29-JAN-1999;
                                                                                                                                           WO200044776-A1
                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
nes 12; Conserv
                                                                                                                                                                                                                                                                                                                                                    1 GCCSLPPCALNNPDYC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-505965/45.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39;
                                                                                                                                                                                cell lung
                                                                                                                                                                                                                                                                                                                                                                                                               56
                                                                                                                                                                                                                                                                                                                                                                                                               AA;
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Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder; neuronal nicotinic acetylcholine receptor; cardiovascular disorder; gastric motility disorder; urinary incontinence; nicotine addiction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        acetylcholine receptors, including cardiovascular disorders, gastric motility disorders, urinary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and seasonal affective disorder, and small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snall. These peptides are found in minute quantities in the venom of the snalls, and are targeted at the neuronal nicotinic acetylcholine receptors of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      alpha-conotoxin polypeptides useful e.g. as neuromuscular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cone snail alpha-conotoxin SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB21463 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               treating unipolar depression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Watkins M, Olivera BM,
                                                                                                                                                                                           28-JAN-2000; 2000WO-US01979
                                                 (UTAH ) UNIV UTAH RES FOUND (COGN-) COGNETIX INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40 GCCSRPPCIANNPDLC 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 33; 229pp; English.
Olivera BM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99US-0118381
                                                                                                                                       99US-0118381
                                                                                                                                                                                                                                                                                                                                                                                                                   carcinoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      76.9%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16
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Hillyard DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         derived from the venom of cone snails blocking agents for use in surgery and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ID NO: 133
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             McIntosh JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 21;
0.0074;
  McIntosh JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in surgery and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jones RM;
  Jones RM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
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RESULT 11
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Best Local (
The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snail. These peptides are found in minute quantities in the venom of the snails, and are targeted at the neuronal nicotinic acetylcholine receptors of the
                                                                                                                   Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic acetylcholine receptors, including cardiovascular disorders, gastric motility disorders, uninary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and seasonal affective disorder, and small cell lung carcinoma.
                                                                                                                                                                              alpha-conotoxin polypeptides useful e.g. as neuromuscular
                                                                                                                                                                                                                                                  N-PSDB; AAA89516
                                                                                                                                                                                                                                                                                                                 Watkins M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              neuronal nicotinic acetylcholine receptor; cardiovascular gastric motility disorder; urinary incontinence; nicotine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snail. These peptides are found in minute quantities in the venom of the snails, and are targeted at the neuronal nicotinic acetylcholine receptors of the
                                                                                                                                                         treating
                                                                                                                                                                                                                                                                                                                                                                                                                         29-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-JAN-2000; 2000WO-US01979
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cone snail alpha-conotoxin SEQ ID NO: 368.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB21620 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nervous system. They usually contain two disulphide bonds, which them defined conformations, a rarity in molecules this small. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        alpha-conotoxin polypeptides derived from the venom of cone snails useful e.g. as neuromuscular blocking agents for use in surgery and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        useful e.g. as new treating unipolar
                                                                                                                                                                                                                                                                                                                                                          (COGN-)
                                                                                                                                                                                                                                                                                                                                                                              (UTAH )
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                                                                                                                                                                                                                                                                      2000-505965/45
                                                                                                                   39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cell lung
                                                                                                                                                                                                                                                                                                                                                          COGNETIX INC
                                                                                                                                                                                                                                                                                                                                                                              UNIV UTAH RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                         unipolar
                                                                                                                   Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 42-43; 229pp; English.
                                                                                                                                                                                                                                                                                                             Olivera BM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA;
                                                                                                                   62;
                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0118381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              carcinoma.
                                                                                                                                                         depression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          depression
                                                                                                          229pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     76.9%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55
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                                                                                                                                                                                                                                                                                                               Hillyard
                                                                                                              English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                            blocking
                                                                                                                                                                                                  derived
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); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 80;
                                                                                                                                                                                                                                                                                                               DR,
                                                                                                                                                                                                  from
                                                                                                                                                                              agents
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                                                                                                                                                                                                                                                                                                             McIntosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                  the venom of cone snails
                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                             ΜĽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 59;
                                                                                                                                                                                use
                                                                                                                                                                                ín
                                                                                                                                                                            surgery and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          which give
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                        The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snall. These peptides are found in minute quantities in the venom of the snalls, and are targeted at the neuronal nicotinic acetylcholine receptors of the nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic acetylcholine receptors, including cardiovascular disorders, gastric acetylcholine receptors, including cardiovascular disorders, gastric
                                                                          alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic acetylcholine receptors, including cardiovascular disorders, gastric
                                                                                                                                                                                                                                                                                                                                                                                                                           (UTAH )
(COGN-)
                                          motility disorders, urinary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and
                                                                                                                                                                                                                                           Claim 39; Page 41; 229pp; English.
                                                                                                                                                                                                                                                                                         alpha-conotoxin polypeptides derived from the venom of cone snails useful e.g. as neuromuscular blocking agents for use in surgery and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-JAN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        small
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder; neuronal nicotinic acetylcholine receptor; cardiovascular disorder; gastric motility disorder; urinary incontinence; nicotine addiction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cone snail alpha-conotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB21459 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 motility disorders, urinary incontinence, nicotine addiction, disorders such as bipolar disorder, unipolar depression, dyst seasonal affective disorder, and small cell lung carcinoma.
                                                                                                                                                                                                                                                                           treating unipolar depression
                                                                                                                                                                                                                                                                                                                                                                                             Watkins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conus episcopatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-JAN-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l Similarity
12; Conserv
                                                                                                                                                                                                                                                                                                                                          AAA89434
                                                                                                                                                                                                                                                                                                                                                                                         M, Olivera
                                                                                                                                                                                                                                                                                                                                                                                                                           COGNETIX INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0118381
                                                                                                                                                                                                                                                                                                                                                                                           BM,
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75.0%;
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                                                                                                                                                                                                                                                                                                                                                                                           Hillyard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1;
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Pred. No. 0.0043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             small cell lung carcinoma
                                                                                                                                                                                                                                                                                                                                                                                         DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        125
                                                                                                                                                                                                                                                                                                                                                                                         McIntosh JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 21;
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Best Local Similarity
Matches 12; Conserv
Query Match 72...
Best Local Similarity 68.8
Matches 11; Conservative
                                                                        The kappa-conotoxin, alpha conotoxin and alpha-like conotoxin peptides all belong to a group of peptides known as the A-lineage conotoxin peptides. The A-lineage conotoxin peptides have a wide variety of pharmacological uses. The A-lineage conotoxin peptides claimed (AAR75264-R75293) are useful for the inhibition of synaptic transmission at neuromuscular junctions by blocking nicotinic acetyl choline receptors and they also have activity against voltage-gated choline receptors
                                                                                                                                                                                                                                                   Cruz
                                                                                                                                                                                                                                                                                                                                        27-APR-1995
                                                                                                                                                                                                                                                                                                                                                             WO9511256-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conus bandanas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conotoxin; neuromuscular; synapse; signal transmission;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A-lineage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-DEC-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR75274 standard; peptide; 16 AA
                                                                                                                                                               Claim 1;
                                                                                                                                                                                  New A-lineage conotoxin peptide(s) - which inhibit synaptic transmission at the neuromuscular junction or are active aga potassium or sodium channels
                                                                                                                                                                                                                               WPI; 1995-170189/22.
                                                                                                                                                                                                                                                                        (UTAH ) UNIV UTAH RES FOUND
                                                                                                                                                                                                                                                                                                                  19-OCT-1994;
                                          Sequence
                                                                and K channels.
                                                                                                                                                                                                                                                                                             19-OCT-1993;
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                                                                                                                                                              Page 41;
                                                                                                                                                                                                                                                  Hillyard DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    conotoxin BN-1 peptide.
                                          16
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                                          AA;
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75.0%;
           72.1%;
                                                                                                                                                                                                                                                                                                                                                                                 "preferably amidated"
                                                                                                                                                                                                                                                                                                                                                                                                     "Asp, can form a peptide bond via either alpha or beta carboxyl group"
                                                                                                                                                                                                                                                                                                                                                                                                                                      "Hydroxyproline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Hydroxyproline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pro or OTHER
                                                                                                                                                              English.
                                                                                                                                                                                                                                                  Mcintosh JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pro or OTHER
2;
           Score
Pred.
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  Mismatches
           75;
No.
                                                                                                                                                                                                                                                   Olivera BM,
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          DB 16;
0.01;
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                    Length 16;
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RESULT 14
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AAB21435
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                                                                                                                                                                                                                                                                                                                      The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snall. These peptides are found in minute quantities in the venom of the snalls, and are targeted at the neuronal nicotinic acetylcholine receptors of the nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               alpha-conotoxin polypeptides derived from the venom of cone snails
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gastric motility disorder; urinary incontinence; nicotine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cone snail; alpha-conotoxin; venom; disulphide bond; mood neuronal nicotinic acetylcholine receptor; cardiovascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cone snail
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                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 39; Page 59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAA89505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JAN-1999;
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AAB21435;
                                                                                                                                                                                                            Sequence
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                           AAB21435 standard;
                                                                                                                                                                                                                                       seasonal affective disorder,
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                                                                                                                          GCCSLPPCALNNPDYC 16
                                                                                                GCCSHPACSVNNPDIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  e.g. as neuromuscular ng unipolar depression
                                                                                                                                                    l Similarity
11; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    alpha-conotoxin
                                                                                                                                                                                                            38 AA;
                                                                                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptide;
                           Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                        229pp; English.
                                                                                                                                                                 72.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38
                           60
                                                                                                                                                                   Score 75; DB 21
Pred. No. 0.021;
                                                                                                                                                                                                                                       and small cell lung carcinoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 blocking agents for use in surgery and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                           ΑA
                                                                                                                                                       Mismatches
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                                                                                                                                                                                DB 21;
                                                                                                                                                                              Length 38;
                                                                                                                                                       Indels
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19-JAN-2001

(first entry)

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Search completed: January 8,
Job time: 31.0606 secs
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                                                                                                                                      Matches
                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                             The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snail. These peptides are found in minute quantities in the venom of the snails, and are targeted at the neuronal nicotinic acetylcholine receptors of the nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic acetylcholine receptors, including cardiovascular disorders, gastric motility disorders, uninary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and seasonal affective disorder, and small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 39; Page 34; 229pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            alpha-conotoxin polypeptides derived from the venom of cone snails useful e.g. as neuromuscular blocking agents for use in surgery and for treating unipolar depression -
                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-505965/45.
N-PSDB; AAA89410.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Watkins M, Olivera BM,
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                                                                  44 GCCSHPACSVNNPDIC 59
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US-08-487-104-46B-5
US-08-487-104-46B-6
US-08-487-06B-6
US-09-219-446B-6
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US-09-48B-799-93
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; TYPE: PRT
; ORGANISM: Conus purpurascens
US-09-219-446B-9
                                                                                                             APPLICANT:
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APPLICANT:
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APPLICANT: Luo, Siqin
APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
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                                                                      APPLICANT:
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PRIOR APPLICATION NUMBER: US/09/219,446B
CURRENT FILLING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR FILING DATE: 1998-04-03
PRIOR FILING DATE: 1998-04-03
PRIOR FILING DATE: 1997-12-31
PRIOR FILING DATE: 1997-12-31
PRIOR FILING DATE: 1997-12-31
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Local Similarity 93.8%;
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Yoshikami, Doju
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Cartier, G. Edward
Luo, Siqin
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US-08-137-800-46
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APPLICANT: Olivera, Baldomero M.

APPLICANT: Cruz, Lourdes J.

APPLICANT: Hillyard, David R.

APPLICANT: McIntosh, J. Michael

APPLICANT: Santos, Ameurfina D.

TITLE OF INVENTION: Conotoxin Peptides
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                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/137
FILING DATE: 19-OCT-1993
CLASSIFICATION: 531
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEPAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 46:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS:
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            ORIGINAL SOURCE:
ORGANISM: Con
                                                                          MOLECULE TYPE: pe
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                                                     HYPOTHETICAL:
ANTI-SENSE: N
                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 65 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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CORRESPONDENCE ADDRESS:
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STATE: DC
TD: 20005
                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: WordPerfect 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: Venable, Baetjer, Howard & Civiletti STREEI: 1201 New York Avenue N.W., Suite 1000
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Local Similarity 87.5%;
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                                                                                                                                     amino acid
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                 Conus bandanus
                                                                                                                  linear
                                                                                             peptide
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Pred. No. 1.4e-05;
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US-08-487-174-46
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US-08-477-383-46
               RESULT 7
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Patent No.
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Best Local Similarity
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ADDRESSEE: Venable, Baetjer, Howard & Civiletti
STREET: 1201 New York Avenue, N.W., Suite 1000
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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APPLICANT:
                                                                                                                                                                                                                TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ORIGINAL SOURCE:
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                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION: TELEPHONE: 202-962-4810
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SOFTWARE: Patenti
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STATE: DC
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                                                             49 GCCSHPACSVNNPDIC 64
                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                    TYPE: amino acid
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                 LENGTH:
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                                                                                           1 GCCSLPPCALNNPDYC 16
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5. 5589340
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                                                                                                                                                                                                      Conus bandanus
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                                                                                                                                        72.1%;
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68.8%;
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                                                                                                                        Score 75; DB 1; --
Pred. No. 0.0096;
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US-08-487-174-46
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                                                                                                                                        Sequence 46, Application Patent No. 5633347
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                          Matches
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Best Local Similarity
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: DOS PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24/
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Olivera, Baldomero M. APPLICANT: Cruz, Lourdes J.
                                                                                   APPLICANT: Olivera, Baldomero M. APPLICANT: Cruz, Lourdes J. APPLICANT: Hillyard, David R.
             APPLICANT: Macintosh, J. Michael
APPLICANT: Santos, Ameurfino S.
TITLE OF INVENTION: Conctoxin Peptides
NUMBER OF SEQUENCES: 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: peptide HYPOTHETICAL: NO
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APPLICATION NUMBER:
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 07 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Ihnen, Jeffrey REGISTRATION NUMBER:
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                                                                                                                                                                                                                                                                      49 GCCSHPACSVNNPDIC 64
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                       1 GCCSLPPCALNNPDYC 16
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1201 New York Avenue, N.W., Suite 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      U.S.A.
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                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                 Conus bandanus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
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Pred. No. 0.
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ADDRESSEE:

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HYPOTHETICAL: NO
ORIGINAL SOURCE:
ORGANISM: Conus
                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: LBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                          APPLICANT: McIntosh, J. Michael
APPLICANT: Cartier, G. Edward
APPLICANT: Yoshikami, Doju
APPLICANT: Luo, Siqin
APPLICANT: Luo, Siqin
APPLICANT: Olivera, Baldomero M.
TITLE OF INVENTION: CONOPEPTIDES AUIA, AUIB AND AUIC
CORRESPONDENCE ADDRESS:
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LENGTH: 65 amino acids
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APPLICATION NUMBER: US 08/137,800
FILING DATE: 19-OCT-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/084,848
FILING DATE: 29-JUN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/480,750
FILING DATE: 07-JUN-1995
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CITY: Washington
                                                                                             COUNTRY: U
ZIP: 20005
                                                                                                                              STATE:
                                                                                                                                           CITY: Washington
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REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCSHPACSVNNPDIC 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                              D.C
                                                                                                                                                          E: Venable, Baetjer, Howard & Civiletti
1201 New York Avenue, Suite 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: Venable, Baetjer, Howard & Civiletti
1201 New York Avenue, N.W., Suite 1000
                                                                                                              SU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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PatentIn Release #1.0, Version #1.30
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68.8%;
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APPLICANT: Olivera, Baldomero M.
APPLICANT: McIntosh, J. Michael
APPLICANT: Wcintosh, J. Michael
APPLICANT: Carther, G. Edward
APPLICANT: Curther, G. Edward
APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/219,446B
CURRENT FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR APPLICATION NUMBER: US 60/070,153
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Best Local Similarity
"he'hes 11; Conserv
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                                                                                                                                                                                                  SOFTWARE:
SEQ ID NO 5
                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5, Application US/09219446B Patent No. 6265541
                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS:
                                                                                                                                               ORGANISM: Conus aulicus
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                    TYPE: PRT
                                                                                                                                                                                  LENGTH: 16
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 16 amino acids
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TELEFAX: 202-962-8300
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NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
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LOCATION:
                                                               Local Similarity les 11; Conserv
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                            1 GCCSLPPCALNNPDYC 16
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                                                               Conservative
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                                                                             71.2%;
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                                                                             Score 74; DB 4;
Pred. No. 0.0035;
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Pred. No. 0.0035;
0; Mismatches 5;
                                                             Mismatches
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US-09-219-446B-6
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Patent No. 5866682
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APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptic
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/219,446B
CURRENT FILING DATE: 1998-12-23
PRIOR APPLICATION UNBER: US 60/080,588
PRIOR FILING DATE: 1998-04-03
PRIOR FILING DATE: 1998-04-03
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PRIOR APPLICATION NUMBER: US (
PRIOR FILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
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APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
          CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 2426
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence: Tyr derivative OTHER INFORMATION; of C. aulicus AuIA
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                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: McIntosh, J. Michael
APPLICANT: Cartier, G. Edward
APPLICANT: Yoshikami, Doju
APPLICANT: Luo, Siqin
APPLICANT: Olivera, Baldomero M.
TITLE OF INVENTION: CONOPEPTIDES AUIA, AUIB AND AUIC
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
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                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                    CITY: Washington STATE: D.C.
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                                                                                                                                                               APPLICATION NUMBER:
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TELEPHONE:
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Cartier, G. Edward
Luo, Sigin
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McIntosh, J. Michael
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1201 New York Avenue, Suite 1000
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                                       24260-121388
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; LENGTH: 16
; TYPE: PRT
; ORGANISM: Conus aulicus
US-09-219-446B-8
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; LOCATION:
US-08-857-068-4
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                                                                                                                       RESULT 14
US-08-857-068-3
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                                                                      Sequence 3, Application Patent No. 5866682 GENERAL INFORMATION:
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APPLICANT:
                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: University of Utah Research Foundation TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides FILE REFERENCE: Uses of Alpha-Conotoxins CURRENT APPLICATION NUMBER: US/09/219,446B CURRENT FILLING DATE: 1998-12-23 PRIOR APPLICATION NUMBER: US 60/080,588 PRIOR ETLING DATE: 1998-04-03
                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: SOFTWARE: Patentin V
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                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US PRIOR FILING DATE: 1997-12-31
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 16 amino acids
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NAME/KEY:
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APPLICANT:
                APPLICANT:
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                                                                                                       Application US/08857068
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Olivera, Baldomero M
                                           McIntosh, J. Michael
Cartier, G. Edward
                                                                                                                                                                                                                                               Conservative
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            Yoshikami, Doju
Luo, Siqin
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62.58;
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62.58;
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                                                                                                                                                                                                                                                                            DB 4;
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Sequence 95, Application US/09488799
Patent No. 6288473
GENERAL INFORMATION:
APPLICANT: Olivera, Baldomero M.
APPLICANT: Hayer, Richard T.
APPLICANT: Halyard, David R.
APPLICANT: Hillyard, David R.
APPLICANT: Wointosh, J. Michael
APPLICANT: Wointosh, J. Michael
APPLICANT: Schoenfeld, Robert M.
TITILE OF INVENTION: Alpha Conotoxin Peptides
FILE REFERENCE: Alphas 1
CURRENT APPLICATION NUMBER: US/09/488,799
CURRENT FILING DATE: 1909-01-22
EARLIER APPLICATION NUMBER: 60/116,881
EARLIER FILING DATE: 1999-01-22
EARLIER FILING DATE: 1999-01-22
EARLIER FILING DATE: 1999-01-22
EARLIER FILING DATE: 1999-01-22
SOPTWARE: PatentIn Ver. 2.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; NAME/KEY:
; LOCATION:
US-08-857-068-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 71.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 2426.
TELECOMMUNICATION INFORMATION:
TELECHENCE: 202-962-8810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 202-962-8300 INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: CONOPEPTIDES AUIA, AUIB AND A NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti
STREET: 1201 New York Avenue, Suite 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/857,068 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 1201 New CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GCCSYPPCFATNPD 14
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71.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 66; DB 2; Length 15;
Pred. No. 0.029;
0; Mismatches 4; Indels
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0;

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein - protein search, using sw model
            118974 segs, 19401057 residues
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.: //cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep: *
.: //cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep: *
.: //cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep: *
.: //cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep: *
.: //cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep: *
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.: //cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep: *
.: //cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep: *
.: //cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep: *
.: //cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep: *
.: //cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep: *
.: //cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep: *
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.: //cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep: *
.: //cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep: *
.: //cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep: *
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

19	17	16	15	14	13	12	11	10	9	8	7	6	5	4	ω	N	1	Result
42.5	42.5	42.5	42.5	43	45	47	47	50	50	58	67	74	74	94	99	99	104	Score
40.4	40.9	40.9	40.9	41.3	43.3	45.2	45.2	48.1	48.1	55.8	64.4	71.2	71.2	90.4	95.2	95.2	100.0	Query Match
4545 12	1924	469	97	34	16	218	52	17	16	15	16	17	16	16	16	16 .	16	% Query Match Length I
10	9	10	10	10	10	12	10	10	10	10	10	10	10	10	10	10	10	DB
US-09-897-465-13	US-09-866-557A-2	US-09-925-301-1377	US-09-867-550-1022	US-09-864-761-40671	US-09-897-465-4	US-10-116-064-3	US-09-864-761-47370	US-09-897-465-3	US-09-897-465-2	US-09-897-465-7	US-09-897-465-8	US-09-897-465-6	US-09-897-465-5	US-09-897-465-11	US-09-897-465-12	US-09-897-465-9	US-09-897-465-10	ID
sequence 2, Appli Sequence 13, Appl	Sequence 2, Appli	Sequence 1377, Ap	Sequence 1022, Ap	Sequence 40671, A	Sequence 4, Appli	Sequence 3, Appli	Sequence 47370, A	Sequence 3, Appli	Sequence 2, Appli	Sequence 7, Appli	Sequence 8, Appli	Sequence 6, Appli	Sequence 5, Appli	Sequence 11, Appl	Sequence 12, Appl	Sequence 9, Appli	Sequence 10, Appl	Description

ALIGNMENTS

US-09-897-465-10

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APPLICANT: Luo, Sigin
APPLICANT: University of Utah Research Foundation
APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxins
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/897,465
CURRENT FILING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR FILING DATE: 1998-04-03
PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR FILING DATE: 1997-12-31
US-09-897-465-9; Sequence 9, Application US/09897465
                                                                                                                                                                                      Query Match
Best Local Similarity
Watches 16; Conserve
                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Description of Artificial Sequence:A10L derivative ; OTHER INFORMATION: of C. purpurascens PnIA US-09-897-465-10
                                                     RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 10, Application US/09897465 Patent No. US20020022715A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Olivera, Baldomero M.
APPLICANT: McIntosh, J. Michael
APPLICANT: Yoshikami, Doju
APPLICANT: Cartier, G. Edward
                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 16
TYPE: PRT
ORGANISM: Artificial Sequence
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                                                                                                                                               1 GCCSLPPCALNNPDYC 16
                                                                                                                       1 GCCSLPPCALNNPDYC 16
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                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                0;
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Pred. No. 1e-07;
Mismatches 0;
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RESULT 4
US-09-897-465-11
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                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 12
LENGTH: 16
TYPE: PRT
Sequence 11, Application US/09897465 Patent No. US20020022715A1
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                                                                                                                                                                                                                                  Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR FILING DATE: 1998-04-03
PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR FILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: WcIntosh, J. Michael
APPLICANT: Yoshikami, Doju
APPLICANT: Cartier, G. Edward
APPLICANT: Luo, Siqin
APPLICANT: Luo, Siqin
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/897,465
CURRENT FILING DATE: 2001-07-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Olivera, Baldomero M. APPLICANT: McIntosh, J. Michael
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                                                                                                                        1 GCCSLPPCALSNPDYC 16
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15; Conserv
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Luo, Siqin
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Yoshikami, Doju
                                                                                                                                                                                                              Conservative
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                                                                                                                                                                                                                              95.2%;
93.8%;
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                                                                                                                                                                                                                            Score 99; DB 10; Length 16; Pred. No. 4.3e-07;
                                                                                                                                                                                                            Mismatches
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APPLICANT: Luo, Siqin
APPLICANT: University of Utah Research Foundation
APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/897,465
CURRENT FILING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR FILING DATE: 1998-04-03
PRIOR FILING DATE: 1998-12-31
NUMBER OF SEQ ID NOS: 13
COSTWARE: Patentin Ver. 2.0
  В
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                                                                                                                                                                                                                              SEQ ID NO 5
LENGTH: 16
                                                                                  Matches
                                                                                                  Query Match 71.2%;
Best Local Similarity 68.8%;
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APPLICANT:
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APPLICANT: McIntosh, J. Michae
APPLICANT: Yoshikami, Doju
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PRIOR FILING DATE: 1998-04-03
PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR FILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
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APPLICANT: McIntosh, J. Michael
APPLICANT: Yoshikami, Doju
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                             TYPE: PRT
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TYPE: PRT
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                                       1 GCCSLPPCALNNPDYC 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 90.4%;
Local Similarity 87.5%;
1 GCCSYPPCFATNSDYC 16
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Yoshikami, Doju
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Yoshikami, Doju
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                                                                                Conservative
                                                                                                  Score 74; DB 10;
Pred. No. 0.00066;
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Pred. No. 1.9e-06;
                                                                                Mismatches
                                                                                                                     DB 10; Length 16;
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RESULT 6 US-09-897-465-6

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; TYPE: PTE
; ORGANISM: Conus aulicus
US-09-897-465-8
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APPLICANT: Olivera, Baldomero M.
APPLICANT: McIntosh, J. Michael
APPLICANT: Yoshikami, Doju
APPLICANT: Cartier, G. Edward
APPLICANT: Luo, Sigin
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                                                                                            Best Local Similarity
                                                                                                              Query Match
                                                                                                                                                                                                                              SEQ ID NO 8
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                                                                                                                                                                                                                                                                                                     APPLICANT: University of Utah Research Foundation TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides FILE REFERENCE: Uses of Alpha-Conotoxins CURRENT APPLICATION NUMBER: US/09/897,465 CURRENT FILING DATE: 2001-07-03 PRIOR APPLICATION NUMBER: US 60/080,588 PRIOR APPLICATION NUMBER: US 60/070,153
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                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn Ver. 2
                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1997-12-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Description of Artificial Sequence: Tyr derivative OTHER INFORMATION: of C. aulicus AuIA
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                                    1 GCCSLPPCALNNPDYC 16
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GCCSYPPCFATNSGYC 16
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Yoshikami, Doju
Cartier, G. Edward
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                                                                            Conservative
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Pred. No. (
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                                                                                              Score 67; DB 10; Pred. No. 0.0051;
                                                                            Mismatches
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ches 5;
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APPLICANT: University of Utah Research Foundation TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides FILE REFERENCE: Uses of Alpha-Conotoxins CURRENT APPLICATION NUMBER: US/09/897,465; CURRENT ETLING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR FILING DATE: 1998-04-03
PRIOR FILING DATE: 1998-04-03
PRIOR FILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
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                                                                                                                                                                       ; TYPE: PRT; ORGANISM: Conus magus US-09-897-465-2
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APPLICANT: Olivera, Baldomero M
APPLICANT: McIntosh, J. Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 7 LENGTH: 15
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Best Local :
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                                                                                 Best Local Similarity Matches 8; Conserv
                                                                                                                          Query Match
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APPLICANT: McIntosh, J. Michael
APPLICANT: Yoshikami, Doju
APPLICANT: Cartler, G. Edward
APPLICANT: Luo, Siqin
                                                                                                                                                                                                                                                                                                                   APPLICANT: Luo, Sigin
APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/897,465
CURRENT FILING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR ETLING DATE: 1998-04-03
PRIOR ETLING DATE: 1997-12-31
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                                                                                                                                                                                                                                    LENGTH: 16
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Local Similarity 64.3%;
nes 9; Conservative
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                                      1 GCCSLPPCALNNPDYC 16
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GCCSNPVCHLEHSNLC 16
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Luo, Sigin
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Yoshikami, Doju
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Yoshikami, Doju
                                                                                      Conservative
                                                                                                          48.1%;
50.0%;
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                                                                                                        Score 50; DB 10; Length 16; Pred. No. 0.75;
                                                                                      2; Mismatches
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Pred. No. 0.068;
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APPLICANT: McIntosh, J. Michae:
APPLICANT: Yoshikami, Doju
APPLICANT: Cartier, G. Edward
APPLICANT: Luo, Siqin
APPLICANT: University of Utah 1
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PRIOR
PRIOR
                                                                                                                                                                                                                              PRIOR FILING DATE: 2000-10-04
PRIOR FILING DATE: 2000-10-04
PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR APPLICATION NUMBER: US 60/236,359
                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
                  PRIOR APPLICATION NUMBER: PCT/US01/00669
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00665
PRIOR FILING DATE: 2001-01-30
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PRIOR APPLICATION NUMBER: PCT
PRIOR FILING DATE: 2001-01-30
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PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
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TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: GB 24263.6
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PRIOR FILLING DATE: 1998-04-03
PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR FILLING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
SOFTWARE: Patentin Ver. 2.0
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CURRENT FILING DATE: 2001-07-03
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TYPE: PRT
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nes 8; Conserv
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                                                                                                           APPLICATION NUMBER: PCT/US01/00664 FILING DATE: 2001-01-30
                                                                                                                                                   APPLICATION NUMBER: PCT/US01/00667
FILING DATE: 2001-01-30
                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/US01/00666
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Yoshikami, Doju
Cartier, G. Edward
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50.0%;
PCT/US01/00668
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Pred. No. 0.79
2; Mismatches
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RESULT 12
US-10-116-064-3
; Sequence 3, Application US,
; Patent No. US20020115187A1
; GENERAL INFORMATION:
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Best Local Similarity
"---hes 7; Conserv?
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; OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 0.57
; OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 0.59
; OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 0.54
; OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 0.45
US-09-864-761-47370
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LENGTH: 52
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NUMBER OF SEQ ID NOS: 49117
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                                   FILING DATE: 13-I
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                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/116,064
FILING DATE: 05-Apr-2002
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                     SEQUENCE CHARACTERISTICS:
                                                                                                                               PRIOR APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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APPLICATION NUMBER: PCT/US01/00661
STITING DATE: 2001-01-30
STITING DATE: 2001-01-30
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ROSEN, CRAIG
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                                                                      APPLICATION NUMBER: 09/262,087
FILING DATE: 04-MAR-1999
APPLICATION NUMBER: PCT/US94/14498
                                                                                                                                                    CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                      COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
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LENGTH: 218 amino acids
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Pred. No.
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; OTHER INFORMATION: Description of Artificial Sequence:FAT derivative ; OTHER INFORMATION: of C. magus MII US-09-897-465-4
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US-09-897-465-4
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Best Local :
         APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
FILE REFERENCE: Aeomica-X-1
CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
PRIOR FILING DATE: 2000-05-26
PRIOR FILING DATE: 2000-05-26
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CURRENT FILING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: US/06/080,588
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PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR FILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
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Local Similarity 36.48;
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les 7; Conserv
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APPLICATION NUMBER: US 09/632,366
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Pred. No.
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                                                                   APPLICANT: Leach, Martin D.
APPLICANT: Mehraban, Fuad,
APPLICANT: Conley, Pamela
APPLICANT: Law, Debbie
APPLICANT: Topper, James
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Best Local S
Matches 7
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                                                                                                                                                            GENERAL INFORMATION:
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Patent No. US20020082206A1
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SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
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APPLICANT: Topper, James TITLE OF INVENTION: No. US20020082206A1el Polynucleotides from Atherogenic Cells TITLE OF INVENTION: Thereby FILE REFERENCE: 21402-013 (Cura-313) CURRENT APPLICATION NUMBER: US/09/867,550
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ED IN LUNG, SIGNAL = 2
ED IN ADULT LIVER, SIGNAL = 0.53
ED IN HELA, SIGNAL = 5.1
ED IN FETAL LIVER, SIGNAL = 4.7
ED IN BRAIN, SIGNAL = 3.1
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IN HEART, SIGNAL = 3.5
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104
1 GCCSLPPCALNNPD
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Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                             283224 seqs, 96134422 residues
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pir2:*
pir3:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

29	28	27	26	25	24 '	23 '	22 '	21 ′	20 4	19 4	18 4	17 '	16 ′	15 4					10 5							ω V	2	1 9	Result No. Score
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probable transcrip		hypothetical prote	transcription regu	soxR protein VCA00	probable membrane	tissue inhibitor o	metalloproteinase	metalloproteinase	metalloproteinase	metalloproteinase	metalloproteinase	proline-rich prote	prestalk protein p	hypothetical prote	mating-type loci a	clr4 protein - fis	alpha-conotoxin_EI	×		hypothetical prote	probable transcrip	NADP-reducing hydr	alpha-conotoxin Au	alpha-conotoxin Au		alpha-conotoxin Ep	alpha-conotoxin Pn	alpha-conotoxin Pn	Description

ALIGNMENTS

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alpha-conotoxin PnIA [validated] - cone shell (Conus pennaceus)
N;Alternate names; alpha-CTX-PnIA
C;Species: Conus pennaceus
C;Species: Conus pennaceus
C;Date: 19-Mar-1997 #sequence_revision 25-Apr-1997 #text_change 15-Sep-2000
C;Accession: A54877
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A;Title: New mollusc-specific alpha-conotoxins block Aplysia neuronal acetylcholine r A;Reference number: A54877; MUID:94347719; PMID:8068627
A;Accession: A54877
                                                                                                                                                                                                                                                        R;Fainzilber, M.; Hasson, A.; Oren, R.; Burlingame, A.L.; Gordon, D.; Spira, M.E.; Zl Biochemistry 33, 9523-9529, 1994
A;Title: New mollusc-specific alpha-conotoxins block Aplysia neuronal acetylcholine r A;Reference number: A54877; MUID:94347719; PMID:8068627
A;Accession: B54877
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C;Keywords: acetylcholine receptor inhibitor; amidated carboxyl end; postsynaptic neu F;2-8,3-16/Disulfide bonds: #status experimental
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A; Residues: 1-16 <FAI>
R; Hu, S.H.; Gehrmann, J.; Guddat, L.W.; Alewood, P.F.; Craik, D.J.; Martin, J.E.
submitted to the Brookhaven Protein Data Bank, January 1996
A; Reference number: A66355; PDB:1PEN
A; Contents: annotation; X-ray crystallography, 1.1 angstroms; residues 1-16
                                A;Molecule type: protein
A;Molecule type: protein
A;Residues: 1-16 <FAI>
C;Comment: This alpha-conotoxin, as an acetylcholine receptor inhibitor, is a postsyn
C;Comment: Phis alpha-conotoxin
C;Superfamily: alpha-conotoxin
C;Keywords: acetylcholine receptor inhibitor; amidated carboxyl end; postsynaptic neu
F;2-8,3-16/Disulfide bonds: #status experimental
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C;Date: 19-Mar-1997 #sequence_revision 25-Apr-1997 #text_change 23-May-1997
C;Accession: B54877
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F;16/Modified site: amidated carboxyl end (Cys) #status experimental
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1 GCCSLPPCAANNPDYC 16
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93.8%;
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Pred. No. 3.6e-07;
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A;Status: preliminary
A;Molecule type: protein
A;Molecule type: protein
A;Molecule type: protein
A;Mesidues: 1-16 <LOU>
C;Superfamily: alpha-conotoxin
C;Keywords: acetylcholine receptor inhibitor; amidated carboxyl end; postsynaptic neurot
F;1-16/Product: alpha-conotoxin EpI #status experimental <MAT>
F;2-8,3-16/Disulfide bonds: #status experimental
F;15/Binding site: sulfate (Tyr) (covalent) #status experimental
F;15/Binding site: sulfate (Tyr) (covalent) #status experimental
         alpha-conotoxin AuIC - cone shell (Conus aulicus)
C;Species: Conus aulicus (court cone)
C;Date: 23-Jul-1999 #sequence_revision 23-Jul-199
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c;Species: Conus aulicus (Court cone)
C;Date: 23-Jul-1999 #sequence_revision 23-Jul-1999 #text_change 23-Jul-1999
C;Accession: A59045
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Luo, S.; Kulak, J.M.; Cartier, G.E.; Jacobsen, R.B.; Yoshikami, D.; Olivera, J. Neurosci. 18, 8571-8579, 1998
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A;Title: Alpha-conotoxin EpI, a novel sulfated peptide from Conus episcopatus A;Reference number: A59042; MUID:98288307; PMID:9624161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            alpha-conotoxin EpI - cone shell (Conus episcopatus)
C;Species: Conus episcopatus (bishop's cone)
C;Date: 23-U1-1999 #sequence_revision 23-U1-1999 #text_change 13-Aug-1999
C;Accession: A59042
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75.0%;
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93.8%;
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Pred. No.
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J.00017;
J.3;
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                   C; Genetics:
                                                                                                                                                                                                                              R;Smith, D.R.; Doucette-Stamm, L.A.; Deloughery, C.; Lee, H.; Dubois, J.; Aldredge, ; Qiu, D.; Spadafora, R.; Vicaire, R.; Wang, Y.; Wierzbowski, J.; Gibson, R.; Jiwan ki, S.; Church, G.M.; Daniels, C.J.; Mao, J.; Rice, P.; Noelling, J.; Reeve, J.N. J. Bacteriol. 179, 7135-7155, 1997
                                              A; Experimental source: strain Delta
                                                                     A; Cross-references:
                                                                                        A; Molecule type: DNA
A; Residues: 1-149 < MTH>
                                                                                                                                     A;Status: preliminary; nucleic acid sequence not
                                                                                                                                                                  A; Accession: E69073
                                                                                                                                                                                      A; Reference number: A69000; MUID: 98037514; PMID: 9371463
                                                                                                                                                                                                     A; Title: Complete genome sequence of Methanobacterium thermoautotrophicum Delta H:
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J. Neurosci. 18, 8571-8579, 1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession: B59045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Superfamily: alpha-conotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Status: preliminary
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Best Local
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                                                             GB:AE000915; GB:AE000666; NID:g2622664; PIDN:AAB86022.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55.8%;
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62.5%;
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shown;

translation not shown

Jiwani,

PID:g262

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A:Reference number: A59045; MUID:99003392; PMID:9786965
A:Recession: B59045
                                                                                                   F;15/Modified site: amidated carboxyl end (Cys) #status experimental
                                                                                                                                     C;Keywords: acetylcholine receptor inhibitor; amidated carboxyl F;1-15/Product: alpha-conotoxin AuIB #status experimental <MAT>F;2-8,3-15/Disulfide bonds: #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Conus aulicus (court cone)
C;Date: 23-Jul-1999 #sequence_revision 23-Jul-1999 #text_change 23-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Alpha-conotoxin AuIB selectively blocks alpha3beta4 nicotinic acetylcholine A;Reference number: A59045; MUID:99003392; PMID:9786965 A;Accession: C59045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            alpha-conotoxin AuIB - cone shell (Conus aulicus)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;16/Modified site: amidated carboxyl end (Cys) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;1-16/Product: alpha-conotoxin AuIC #status experimental <MAT> F;2-8,3-16/Disulfide bonds: #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Keywords: acetylcholine receptor inhibitor; amidated carboxyl end;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Luo, S.; Kulak, J.M.; Cartier, G.E.; Jacobsen, R.B.; Yoshikami, D.; Olivera, B.M.; J. Neurosci. 18, 8571-8579, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                  G.E.; Jacobsen, R.B.; Yoshikami, D.; Olivera,
Pred. No. 0.11
0; Mismatches
                                                      Score 58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 67;
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                            0.11;
                                                      DB 2;
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  5
                                                        Length 15;
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Gaps
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  0;
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probable transcription regulator soxR-like - Streptomyces coelicolor
C;Species: Streptomyces coelicolor
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 07-Dec-1999
C;Accession: T36798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       submitted to the EMBL Data Library, June 1998 A; Reference number: Z19657 A; Accession: T23033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hypothetical protein H02K04.1 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 29-Oct-1999 C;Accession: T23033; T27666
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C; Genetics:
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A; Accession: T36798
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                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-260 <MIZ>
A; Cross-references: EMBL; Z81142; PIDN: CABO3511.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;White,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:AL096811; PIDN:CAB46795.1; GSPDB:GN00070; SCOEDB:SCI30A.18c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-175 <OLI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary; translated from GB/EMBL/DDBJ
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                                                                                      A;Gene: CESP:H02K04.1
A;Map position: 5
A;Introns: 22/3; 81/1; 112/3; 173/1; 204/3
                                                                                                                                                                              A; Experimental source: clone 2K1037
                                                                                                                                                                                                                                                                                    A; Reference number: Z20401
A; Accession: T27666
                                                                                                                                                                                                                                                                                                                                   submitted to the EMBL Data Library, October 1996
                                                                                                                                                                                                                                                                                                                                                          R;Basham,
                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
                                                                                                                                                                                                                                                                  A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                             A; Experimental source: clone H02K04
                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: EMBL:AL023813; PIDN:CAA19425.1; GSPDB:GN00023; CESP:H02K04.1
                                                                                                                                                                                                                                                                                                                                                                                                                         A; Residues: 1-260 <WIL>
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                                            Query Match
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Local Similarity hes 7; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                K.; Harris, D.; Bentley, S.D.; Parkhill, J.; Barrell, B.G.; Rajandream, M.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 64.3%;
9; Conservation
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    Conservative
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                  50.0%;
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  Score 52; DB
Pred. No. 6.9;
3; Mismatches
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Pred. No. 0.93;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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                    DB 2;
6.9;
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                                            Length 260;
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    0;
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    Gaps
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      0,
  alpha-conotoxin EI - cone shell (Conus ermineus)
C;Species: Conus ermineus (ermine cone)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: A55889
C;Accession: A55889
R;Martinez, J.S.; Olivera, B.M.; Gray, W.R.; Craig, A.G.; Groebe, D.R.; Abramson, Biochemistry 34, 14519-14526, 1995
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A; Gene: al
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J. Biol. Chem. 271, 7522-7528, 1996
A;Title: A new alpha-conotoxin which targets alpha3beta2 nicotinic acetylcholine rece A;Reference number: A59046; MUID:96205934; PMID:8631783
A;Accession: A59046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         alpha-conotoxin MII - cone shell (Conus magus)
C;Species: Conus magus (magus cone)
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium A;Reference number: AB1807; MUID:21595285; PMID:11759840 A;Accession: AI2152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nakazaki, N.; Shimpo, S. DNA Res. 8, 205-213, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. strain PCC 7, Note: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. strain PCC 7, Poate: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 30-Jun-2002 C;Accession: AI2152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GB:BA000019; PIDN:BAB74475.1; PID:g17131869; GSPDB:GN00179 A;Experimental source: strain PCC 7120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
A; Residues: 1-386 < KUR>
                                                                                                                                                                                                                                                      C;Superfamily: alpha-conotoxin
C;Keywords: acetylcholine receptor inhibitor; amidated carboxyl end;
F;1-16/Product: alpha-conotoxin MII #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession: A59046
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                                                                                                                                                                                                        F;16/Modified site: amidated carboxyl end (Cys) #status experimental
                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein A; Residues: 1-16 < CAR>
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                                                                                                     Local Similarity
nes 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 CSLPPCALNNPDYC
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                                                 1 GCCSLPPCALNNPDYC 16
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7; Conserva
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                                                                                                                              48.1%;
                                                                                                     2;
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Pred. No.
                                                                                                                              Pred. No. 1.3;
                                                                                                                                                      Score 50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                        Mismatches
                                                                                                                                                      DB 2; Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M.; Yasuda, M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            strain PCC 7120
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S.Z

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C; Genetics:
A; Gene: clr4
A; Map position: II
C; Function:
                                                                               A; Experimental source: strain sp 813
R; Lyne, M.; Rajandream, M.A.; Barrell, B.G.; Baker, submitted to the EMBL Data Library, November 1998
                                         A; Reference number: Z21931
A; Accession: T40460
                                                                                                                                                                                              A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
                                                                                                                                                                                                                                                   A; Reference number: A; Accession: T43700
                                                                                                                                                                                                                                                                                            submitted to the EMBL Data Library, July 1998
                                                                                                                                                                                                                                                                                                                                             C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 18-Feb-2000 C;Accession: T43700; T40460
                                                                                                                                                                                                                                                                                                                                                                                      mating-type loci and centromere silencing protein clr4 - fission yeast (Schizosaccharometers: Schizosaccharomyces pombe
A; Molecule
                        A; Status:
                                                                                                                                                     A; Cross-references: EMBL: AJ007840; PIDN: CAA07709.1
                                                                                                                                                                             A; Residues: 1-490 <LOR>
                                                                                                                                                                                                                                                                                                                         R; Lord,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Description: required for silencing of the mating-type locus and centromeres
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-490 <IVA>
A; Cross-references: EMBI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R:Ivanova, A.V.; Bonaduce, M.; Ivanov, S.V.; Klar, A.J.S.
Nature Genet. 19, 192-195, 1998
A;Title: Chromo- and SET domains of the Clr4 protein are essential for silencing in A;Reference number: Z22657; MUID:98282102; PMID:9620780
A;Accession: T43745
A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clr4 protein - fission yeast (Schizosaccharomyces pombe)
C:Species: Schizosaccharomyces pombe
C:Species: Schizosaccharomyces pombe
C:Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 21-Jan-2000
C:Accession: T43745
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Keywords: acetylcholine receptor inhibitor; amidated carboxyl end; F;3/Modified site: 4-hydroxyproline (Pro) #status experimental F;4-10,5-18/Disulfide bonds: #status experimental F;18/Modified site: amidated carboxyl end (Cys) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A:Note: sequence confirmed by chemical synthesis C:Comment: This alpha-conotoxin, as an acetylcholine receptor inhibitor, is a C:Superfamily: alpha-conotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Title: alpha-Conotoxin EI, a new nicotinic acetylcholine receptor antagonist with nove A;Reference number: A58589; MUID:96062516; PMID:7578057
A;Accession: A58589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: prote A; Residues: 1-18 < MAR>
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les 9; Conserv
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            preliminary; translated from GB/EMBL/DDBJ
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Pred. No.
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Pred. No.
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Job time : 15.0909 secs

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RESULT 15
T16342'
Search completed: January
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                                                                                                                                                                                                                                                                                                 submitted to the EMBL Data Library, November 1995
A;Description: The sequence of C. elegans cosmid F42C5
A;Reference number: 218497
                                                                                                                                                                             A; Introns: 15/2;
                                                                                                                                                                                                                                           A; Molecule type: DNA A; Residues: 1-250 < DUZ>
                                                                                                                                                                                                                                                                                                                                                        R;Du, Z
                                                                                                                                                                                                                                                                                                                                                                    C; Accession:
                                                                                                                                                                                                                                                                                                                                                                       C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Sep-1999
C;Accession: T16342
                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protein F42C5.7 - Caenorhabditis elegans C; Species: Caenorhabditis elegans
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C; Function:
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A;Cross-references: EMBL:AL034382; PIDN:CAA22283.1; GSPDB:GN00067; SPDB:SPBC428.08c
A;Experimental source: strain 972h-; cosmid c428
C;Genetics:
                                                                                                                                                                                                                                                                           A;Status:
                                                                                                                                                                                                                                                                                          A; Accession: T16342
                                                                                                                                                                                                                       A;Cross-references: EMBL:U40799; NID:g1065935; PID:g1065941; PIDN:AAA81484.1; CESP:F4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Gene: clr4; SPBC428.08c
                                                                                                               Matches
                                                                                                                                                                                              Gene:
                                                                                                                                                                                                             Genetics
                                                                                                                                                Query Match
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                                                                                                                              Local
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                                                                               1 GCCSL--PPCALNNPDYC 16
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                                                GCCSMGPPPCPPPPPMC
                                                                                                                                                                                                                                                                        preliminary; translated from GB/EMBL/DDBJ
                                                                                                               Similarity
9; Conserv
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                                                                                                               Conservative
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2003,
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                                                                                                                                           Length 250;
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Maximum DB
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    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Match
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    SwissProt_40:*
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Copyright (c) 1993 - 2003 Compus
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CXAL_CONTE
TIM2_BRAIT
TIM2_BVIN
TIM2_CAVPO
TIM2_BAPS
SH7_CAVPO
SOXR_CONER
CAD1_EUCGU
CADH_BUCGU
CADH_SACOF
CAUPO_SORBUGANIA
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CXAB_CONPE
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Q16055 homo sapien
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Q9t156 bacteriopha
Q50407 cavia porce
Q51506 pseudomonas
P58783 conus ermin
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6 eucalyptus
6 eucalyptus
5 saccharum o
2 zea mays (m
7 borrelia bu
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15 16	21-APR-9 ic neurot	SPECIF:	THEM. VE FOR US ALPI	THE N	A crystal t, alpha-	6311277; Gehrmann	Y."; ctrom. allogra	and alpides by	tion of	YR-1	, σ	1 12		в :	73	eus	g : :	:	STA		411.3 411.3 411.3 411.3 411.3 40.9 40.9	
16 15	-97. otoxin; eptor i	CATION CCITY:	FOR VERTEBRATE S	ALPHA-CONOTOXI HE NICOTINIC AC	struc	77; PubMed=87	34:447	ha-PnIB: 1 electrospion (MALD	Burlingame	ubMed	receptors. 33:9523-952	ic al	ubMedon A.		Conoidea; C	eath	, ,	Ct	TANDARD;		224 350 355 355 488 730 355 361 361 365	177 194
	Neur nhibi	Exp	TRAS RATI	CAC	ture			B: f	A.L	=102	"; 9(19	pha-	, or					Ω̈				
SULFATION.	otoxi tor;	Expressed by TO THE A-SUP	ST TO OTHE	INS ACT ON PO	of the PnIA f	40364; lat L.W.,	1(1999).	PnIB: further ectrospray, ma (MALDI) and a	sulfati	263 H	94).	conotox	8627; en R.,		idae;	one).	sequence annotati	.ed)	PRT;	ALIG	T1M4_RAT FX32_RAT FX32_HUMAN FX32_MOUSE HLX1_HUMAN ROW_HUMAN CADH_EUCBO CADH_LOLER CAD1_ARATH IF3X_YEAST	01
FION.	; Toxin; midation; Sulfat	y the venom d	THER ALPHA-CONOTOXINS, WITHER ALPHA-CONOTOXINS, WITHER CONTROLOGY WITHER TO MOLLUSKS.	ON POSTSYNAPTIC M	ne neuronal acetylcho	Alewood P.F., Cra		vestigation of ix-assisted las ospheric pressu	on in Conus penna	lfonder F Fains		tins block Aplysia	Burlingame A.L.,		Conus.	•	e update) ion update)		16 AA.	ALIGNMENTS	T T T T T T T T T T T T T T T T T T T	HUMAN ESGI
	ion; 3D-s	uct. CONOTOXINS.	INS, WHICH THE CONUS	EMBRANES ACHR) AN	holine r s.";	aik D.J.		abile r e MALI	ი ,	ilber K		neurona	Gordon D		, .	ע					P81556 Q91262 Q969p5 Q9cpu7 Q14774 P52272 P50746 O22380 P48523 Q03690	014683 Q9kit1
	structure.	АГРНА-ТҮРЕ	AR), THEY ID THUS	eceptor	•		ulfo- mass	otoxins			Þ	•								rattus norv rattus norv rattus norv homo sapien mus musculu homo sapien homo sapien eucalyptus lolium pere arabidopsis saccharomyc	homo sapie desulfovib

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CXAB_CONPE
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                                                                                                                                                                                                              X MEDLINE=97444322; PubMed=9298951;
A Hu S.H., Gehrmann J., Alewood P.F., Craik D.J., Martin J.L.;
T "Crystal structure at 1.1-A resolution of alpha-conotoxin PnIB:
T comparison with alpha-conotoxins PnIA and GI.";
L Biochemistry 36:11323-11330(1997).
C -!- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES, THE
C INHIBIT THEM. IN CONTRAST TO OTHER ALPHA-CONOTOXINS, WHICH AR
C SELECTIVE FOR VERTEBRATE SKELETAL MUSCLE NACHR, THE CONUS
SELECTIVE FOR VERTEBRATE SKELETAL MUSCLE NACHR, THE CONUS
C PENNACEUS ALPHA-CONOTOXINS BLOCK NACHR IN MOLLUSKS.
C -!- SUBCELLULAR LOCATION: Secreted.
C -!- SUBCELLULAR LOCATION: Secreted.
C -!- SIMILARITY: BELONGS TO THE A-SUPERFAMILY OF CONOTOXINS. ALPHA
                                       Matches
                                                    Query Match
Best Local
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                                                                                                         MOD_RES
                                                                                            SEQUENCE
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phosphopeptides by electrospray, matrix-assisted laser
desorption/ionization (MALDI) and atmospheric pressure MALDI mass
spectrometry.";
                                                                                                                                     DISULFID
                                                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wolfender J.L., Chu F., Ball H., Wolfender F., Fainzilber M., Baldwin M.A., Burlingame A.L.; "Identification of tyrosine sulfation in Conus pennaceus conc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        acetylcholine receptors.";
Biochemistry 33:9523-9529(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fainzilber M., Hasson A., Oren Spira M.E., Zlotkin E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conus pennaceus (Feathered cone).
Eukaryota; Metazoa; Mollusca; Gastropoda; Caenogastropoda;
Meogastropoda; Conoidea; Conidae; Conus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
Alpha-conotoxin PnIB.
                                                                                                                                                               Acetylcholine
                                                                                                                                                                         Postsynaptic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SULFATION OF TYR-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         acetylcholine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Venom;
MEDLINE=94347719; PubMed=8068627;
M=94347719; PubMed=8068627;
                                                                                                                                                                                                                                                                                                                                                                                             X-RAY CRYSTALLOGRAPHY (1.1 ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=99242956; PubMed=10226369;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=37335;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "New mollusc-specific alpha-conotoxins block Aplysia neuronal
                                                   Local
            1 GCCSLPPCALNNPDYC 16
                                                                                                                                                                                                                                                                                                                                                                                                                       Mass Spectrom. 34:447-454(1999).
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                                                   Similarity
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                                                                                         16 AA;
                                                                                                                                                                                         20-MAY-98
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                                       Conservative
                                                                                                          153
165
                                                                                                                                                                          neurotoxin;
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                                                                                                                                                             receptor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                           1643 MW;
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                                                 95.2%;
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93.
                                                                                                                                                             inhibitor;
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                                                                                                                                                                         Neurotoxin;
                                                                                      05310FF95ED86AF5 CRC64;
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                                                 Score 99; I
Pred. No. 2.
                                                                                                       AMIDATION
                                                                                                                    SULFATION
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Pred. No. 2.7e-08;
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                                   Mismatches
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                                                                                                                                                                          Toxin;
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                                                              DB 1;
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                                                             Length 16;
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                                                                                                                                                                                                              CONOTOXINS. ALPHA-TYPE
                                     Indels
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RESULT 4
CXA1_CON?
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CXA1_CONEP
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                   Luo S., Kulak J.M., Cartier G.E., Jacobsen R.B., Yoshikami D., Olivera B.M., McIntosh J.M., "Alpha-conotoxin AuIB selectively blocks alpha3 beta4 nicotinic
         acetylcholine receptors and nicotine-evoked norepinephrine
                                                                                                                                             Conus aulicus (Court cone).
Eukaryota; Metazoa; Mollusca; Gastropoda; Caenogastropoda;
                                                                                                                                                                                                                               CXA1_CONAL P56639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=98376423; PubMed=9708977;
Hu S.H., Loughnan M., Miller R., Weeks C.M., Blessing R.H., Alewood P.F., Lewis R.J., Martin J.L.;
Alewood P.F., Lewis R.J., Martin J.L.;
"The 1.1-A resolution crystal structure of [Tyr15]EpI, a novel alpha-conotoxin from Conus episcopatus, solved by direct metho Biochemistry 37:11425-11433(1998).

-i- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES,
                                                               MEDLINE=99003392; PubMed=9786965;
                                                                                              SEQUENCE,
                                                                                                                       NCBI_TaxID=89437;
                                                                                                                                  Neogastropoda; Conoidea; Conidae;
                                                                                                                                                                         Alpha-conotoxin AuIA.
                                                                                                                                                                                  15-DEC-1998 (Rel. 37, 15-DEC-1998 (Rel. 37, 15-JUN-2002 (Rel. 41,
                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conus episcopatus (Bishop's cone).
Eukaryota; Metazoa; Mollusca; Gastropoda
Neogastropoda; Conoidea; Conidae; Conus.
NCBI_TaxID=88764;
                                                                                                                                                                                                                                                                                                                                                                                                                                   MOD_RES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Postsynaptic neurotoxin; Neurotoxin; Toxin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alpha-conotoxin EpI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P56638;
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SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Expressed b
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BIND TO THE NICOTINIC ACETYLCHOLINE RECEPTORS (NACHR) AND THUS INHIBIT THEM. THIS PEPTIDE BLOCKS MAMMALIAN NICOTINIC ACETYLCHOLINE RECEPTORS COMPOSED OF ALPHA-3/BETA-2 AND ALPHA-
                                                                                                                                                                                                                                                                                                             GCCSDPRCNMNNPDYC
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                                                                                                                                                                                                                                                                                                                                                                                                                    16 AA;
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18:8571-8579(1998).
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16
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75.0%;
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                                                                                           SPECTROMETRY
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RESULT
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15-DEC-1998 (Rel. 37, C
15-DEC-1998 (Rel. 37, I
15-JUN-2002 (Rel. 41, I
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                                                                                                                                                                                                                                                               J. Neurosci. 18:8571-8579(1998).
J. Neurosci. 18:8571-8579(1998).
J. PUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES, THEY BIND TO THE NICCOTINIC ACETYLCHOLINE RECEPTORS (NACHR) AND THUS INHIBIT THEM. THIS PEPTIDE BLOCKS MAMMALIAN NICOTINIC ACETYLCHOLINE RECEPTORS COMPOSED OF ALPHA-3/BETA-4 SUBUNITS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conus aulicus (Court cone).
Eukaryota; Metazoa; Mollusca; Gast
Neogastropoda; Conoidea; Conidae;
                                                                                                       SEQUENCE
                                                                                                                                              Postsynaptic neurotoxin; Neurotoxin; Toxin; Acetylcholine receptor inhibitor; Amidation DISULFID 2 8
                                                                                                                                                                                                                                                                                                                                                            Luo S., Kulak J.M., Cartier G.E., Jacobsen R.B., Yoshikami
Olivera B.M., McIntosh J.M.;
                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-99003392; PubMed=9786965;
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE, SYNTHESIS,
                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=89437;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alpha-conotoxin AuIC.
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                                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                                                                                                "Alpha-conotoxin AuIB selectively blocks alpha3 beta4 nicotinic
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                                                                Local Similarity
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                                                                                                                                                                                                             TISSUE SPECIFICITY: Expressed by the venom duct.
MASS SPECTROMETRY: MW-1667.6; METHOD-Electrospray.
SIMILARITY: BELONGS TO THE A-SUPERFAMILY OF CONOTOXINS. ALPHA-TYPE
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                                                                64.4%;
62.5%;
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Pred. No. 8
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Pred. No. 0.00085;
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8.9e-05;
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SEQUENCE
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MEDLINE-20037955; PubMed=10573284;
Lu B.-S., Yu F., Zhao D., Huang P.-T., Huang
"Conopeptides from Conus striatus and Conus
cloning.";
                                                                                                                                                                                                                                                                                                                                                            16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update
15-UNN-2002 (Rel. 41, Last annotation upda
Alpha-type conotoxin Tx2 precursor.
Conus textile (Cloth-of-gold cone).
Eukaryota, Metazoa; Mollusca; Gastropoda;
Neogastropoda; Conoidea; Conidae; Conus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conus aulicus (Court cone).
Eukaryota; Metazoa; Mollusca; Gastropoda
Neogastropoda; Conoidea; Conidae; Conus.
NCBI_TaxID=89437;
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15-DEC-1998 (Rel. 37, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
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15-DEC-1998
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                     -!- FUNCTION: Alpha-conotoxins act on postsynaptic membranes, bind to the nicotinic acetylcholine receptors (nAChR) and inhibit them (By similarity).
-!- SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: Expressed by the venom duct.
-!- SIMILARITY: BELONGS TO THE A-SUPERFAMILY OF CONOTOXINS. A
                                                                                                                                   Peptides 20:1139-1144(1999).
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                       SIMILARITY: BELONGS TO THE A-SUPERFAMILY OF CONOTOXINS. ALPHA-TYPE
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Pred. No.
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84EFE95FDC700155 CRC64;
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Spectroscopy: effects of solution environment on helicity.";
Blochemistry 37:15621-15630(1998).

-1- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES,
BIND TO THE NICOTINIC ACETYLCHOLINE RECEPTORS (NACHR) AND
INHIBIT THEM. THIS PEPTIDE BLOCKS MAMALIAN NICOTINIC
ACETYLCHOLINE RECEPTORS COMPOSED OF ALPHA-3/BETA-2 SUBUNIT
HAS AN ACTIVITY 2 TO 4 ORDERS OF MAGNITUDE LESS POTENT ON
NACHR SUBUNIT COMBINATIONS.
-1- SUBCELLULAR LOCATION: Secreted.
-1- TISSUE SPECIFICITY: Expressed by the venom duct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRUCTURE BY NMR.

MEDLINE=98062282; PubMed=9398298;
Shon K.-J., Koerber S.C., Rivier J.E., Olivera B.M., McIntosh J.M.;
"Three-dimensional solution structure of alpha-conotoxin MII, an
                                                                                                                                                                                                                                                                                                                  Craik D
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biochemistry 36:15693-15700(1997).
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J. Biol. Chem. 271:7522-7528(1996).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conus magus (Magus cone).
Eukaryota; Metazoa; Mollusca; Gastropoda; Caenogastropoda;
Neogastropoda; Conoidea; Conidae; Conus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Postsynaptic neurotoxin; Neurotoxin; Toxin; Acetylcholine receptor inhibitor; Signal. SIGNAL 1 21 POTENTIAL. PROPEP 22 48 POTENTIAL. PEPTIDE 49 66 ALPHA-TYPE CONDISULFID 51 57 BY SIMILARITY. DISULFID 52 65 BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 use
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                                                                                                                                                                                                                                                                                                                                                                MEDLINE=99060038; PubMed=9843366;
                                                                                                                                                                                                                                                                                                                                                                                                STRUCTURE BY NMR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Venom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE, AND SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alpha-conotoxin MII (M2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                            "Three-dimensional solution structure of alpha-conotoxin MII by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          McIntosh J.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=6492;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P56636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AF146353; AAD31913.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        œ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           new alpha-conotoxin which targets alpha3beta2 nicotinic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 CCSLPPCALNNPDYC
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                                                                                                                                                                                                                                                                                                                                   Oomen C.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7254 MW;
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ALPHA-TYPE CONOTOXIN TX2.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 0.41;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDDB59BBAB94F26F CRC64;
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                                                                                                                                                                                                                                                                                                                                L.P., Bingham J.-P., Alewood P.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Luo S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 66;
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RESULT 10
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060016; 074
  16-OCT-2001
16-OCT-2001
15-JUN-2002
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MOD_RES
SEQUENCE
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Postsynaptic neurotoxin; Neurotoxin; Toxin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Alpha-conotoxin EI, a new nicotinic acetylcholine receptor antagonist with novel selectivity."; Biochemistry 34:14519-14526(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE::96062516; PubMed=7578057;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alpha-conotoxin EI.
Conus ermineus (Atlantic fish-hunting cone)
Eukaryota; Metazoa; Mollusca; Gastropoda; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-1996 (Rel. 34, 01-OCT-1996 (Rel. 34, 15-JUN-2002 (Rel. 41,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P50982;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Martinez J.S., Olivera B.M., Abramson S.N., McIntosh J.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=55423;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-OCT-1996
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PDB; 1M2C; 13-JAN-99.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GCCSLPPCALNNPDYC 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBUNIT: Binds nicotinic acetylcholine receptor. SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Expressed by the venom duct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE SPECIFICITY: Expressed by the vene SIMILARITY: BELONGS TO THE A-SUPERFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTION BIND TO THE NICOTINIC ACETYLCHOLINE RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INHIBIT THEM.
                                                                                                                                                                                       CCYHPTCNMSNPQIC
                                                                                                                                                                                                                              CCSLPPCALNNPDYC
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                                                                                                                                                                                                                                                                         Similarity 7; Conserv
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8; Conserv
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(Rel. 40, Created)
(Rel. 40, Last sequence)
(Rel. 41, Last annotation)
                                                                                                                                                                                                                                                                         Conservative
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                                                                                                                                                                                                                                                                                                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          receptor inhibitor; Amidation;
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                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Olivera B.M., Gray W.R., Craig A.G., Groebe D.
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1716 MW;
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                                                                                                                                                                                                                                                                                                                                                          MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TO THE A-SUPERFAMILY OF CONOTOXINS. ALPHA-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence update
                                                                                                                                                                                                                                                                         2;
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                                                                                                                                                                                                                                                                                          Pred. No. 0.23;
                                                                                                                                                                                                                                                                                                               Score 50;
                                                                                                                                                                                                                                                                                                                                                        60A61A6C427A6B5E
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                                                                                                                                                                                                                                                                                                                                                                                              HYDROXYLATION
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                                                                                     PRT;
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                                                                                                                                                                                                                                                                       Mismatches
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                       update;
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                                                                                                                                                                                                                                                                       6;
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                                                                                                                                                                                                                                                                                                           Length 18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONOTOXINS. ALPHA-TYPE
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Schizosaccharomyces pombe (Fission yeast).
Eukaryota; Fungi; Ascomycota; Schizosaccharomycetes;
Schizosaccharomycetales; Schizosaccharomycetaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cryptic loci regulator CLR4 OR SPBC428.08C.
                                                                                                                         use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wood V., Gwilliam R., Rajandream M.A., Lyne M., Lyne R., Stewart A., Sgouros J., Peat N., Hayles J., Baker S., Basham D., Bowman S., Brooks K., Brown D., Brown S., Chillingworth T., Churcher C.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thesis (1998), University of Edinburgh, U.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lord
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=SP 813;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nat. Genet. 19:192-195(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ivanova A.V., Bonaduce M.J., Ivanov S.V., Klar A.J.S.; "The chromo and SET domains of the Clr4 protein are es silencing in fission yeast.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               silencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=98282102; PubMed=9620780;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schizosaccharomyces.
                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its the EMBL profit institutions as long as its content is in no way use by non-profit institutions as long as its content is in no way
                                                                                                                or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=21848401; PubMed=11859360;
                      InterPro;
                                  InterPro;
                                                InterPro;
                                                                                                                                                                                                             SWITCHING OF THE MATING TYPE. ACTS THROUGH THE ORGANIZATION OF REPRESSIVE CHROMATIN STRUCTURE. SUBCELLULAR LOCATION: Nuclear (By similarity). SIMILARITY: BELONGS TO THE SUVAR3-9 FAMILY. SIMILARITY: CONTAINS 1 CHROMO DOMAIN. SIMILARITY: CONTAINS 1 SET DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P.;
                                               AF061854; AAC18302.1; -. AJ007840; CAA07709.1; -. AL034382; CAA22283.1; -. Pro; IPR000953; Chromo.
                      IPR003616; PostSET.
IPR001214; SET.
             IPR003606; Zn2-binding.
chromo;
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RESULT 11
GPH_KLEAE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00298; CHROMO; 1.
SMART; SM00508; POSTSET; 1.
SMART; SM00468; PreSET; 1.
SMART; SM00317; SET; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Phosphoglycolate phosphatase (EC 3.1.3.18) (PGP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00856;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9EYY5;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nuclear
                                                                                            Carbohydrate metabolism; Hydrolase. SEQUENCE 253 AA; 27452 MW; DFCC
                                                                                                                   EMBL; AF308467; AAG42459.1; ...
InterPro: IPRO01454; Hignase/hydrlase.
Pfan: PP00702; Hydrolase; 1.
PRINTS; PR00413; HADHALOGNASE.
                                                                                                                                                                              entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                  modified and this statement is not removed.
                                                                                                                                                                                                                 the European Bioinformatics Institute. Thuse by non-profit institutions as long
                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                         phosphate.
-!- SIMILARITY: BELONGS TO THE CBBY/CBBZ/GPH/YIEH FAMILY.
                                                                                                                                                                                                                                                                                                                          aerogenes.";
                                                                                                                                                                                                                                                                                                                                    Kolko M.M., Kapetanovich L.A., Lawr
"Alternative pathways for siroheme
                                                                                                                                                                                                                                                                                                                                                          MEDLINE=20566700; PubMed=11114933;
                                                                                                                                                                                                                                                                                                                                                                          STRAIN-W70
                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                        Klebsiella
                                                                                                                                                                                                                                                                                                                                                                                                                                              Klebsiella aerogenes
                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=28451;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           262 CSSLGGCDLNNPSRC
205 GCCSVGLTYGYNYGEPLALSEPDY 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                Bacteriol 183:328-335(2001).
- CATALYTIC ACTIVITY: 2-phosphoglycolate + H(2)0 = glycolate
                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 CCSLPPCALNNPDYC 16
                     GCCSL------PPCALNNPDY 15
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9; Conserv
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                                                          Similarity
                                                                                                                                                                                                               non-profit
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                                                         46.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                  gamma subdivision; Enterobacteriaceae;
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Pred. No.
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                                                         Score 48.5;
Pred. No. 4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
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                                                                                                                                                                                                                                                                                                                                                  Lawrence
                                                                                             DFCC2FB53188F01D CRC64;
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                                               Mismatches
                                                                                                                                                                                                                                                                                                                                     synthesis in Klebsiella
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                                                                      DB 1;
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                                                                    Length 253;
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PSTA_DICDI
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                                                                                                     REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Signal; Repeat
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProDom; PD006869;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP; P15445; 1A3
DictyDb; DD03006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; M16345; AAA33216.1; -. PIR; A26838; A26838.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 1-17 FROM N.A. MEDLINE=87257883; PubMed=3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Williams J.G.; "Structural and functional characterization of a Dictyostelium gene encoding a DIF inducible, prestalk-enriched mRNA sequence."; Nucleic Acids Res. 15:7463-7476(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-88015608; PubMed=3658700;
Ceccarelli A., McRobbie S.J., Jermyn K.A., Duffy K., Early A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PSTA_DICDI STANDARD; PRT; 10
P11976;
01-OCT-1989 (Rel. 12, Created)
01-OCT-1989 (Rel. 12, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR001673; S_mold_repeat.
Pfam; PF00526; S_mold_repeat; 42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dictyostelium discoideum."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dictyostelium discoideum (Slime mold).
Eukaryota; Mycetozoa; Dictyosteliida; Dictyostelium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Developmental regulation of DNase I-hypersensitive sites
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (DIFFERENTIATION INDUCING FACTOR).
SIMILARITY: THE REPEATED SEQUENCES ARE HIGHLY HOMOLOGOUS REPEAT OF THE PDD63 MRNA OF DICTYOSTELIUM DISCOIDEUM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INDUCTION: BY THE PUTATIVE STALK-SPECIFIC MORPHOGEN DIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cell. Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        K., Neuman W., Rowekamp W.G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1A3F
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S_mold_repeat; 8
                                                                                                                                                                                                                                                                                                                                                                                                                            18
1046
1012
1201
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                                                                                               X-1
X-2
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A-6
A-6
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A-6
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A-6
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A-1
A-10.
B-5.
A-11.
A-12.
B-6.
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41 X 24 AA TANDEM REPEATS, CYS-RICH
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                            DISULFID MOD_RES
                                                                                                                           noradrenaline transporter.";
Nat. Neurosci. 4:902-907(2001).
-!- FUNCTION: Inhibits alpha-1 adrenergic receptors.
-!- SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: Expressed by the venom duct.
-!- TISSUE SPECIFONETRY: MW=2390.15; METHODE-Lectrospray.
                                                                                                                                                                                                                                                                             CXR_CONTU STANDARD; PRT; 19 AA. P58811; 15-JUN-2002 (Rel. 41, Created) 15-JUN-2002 (Rel. 41, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Rho-conotoxin TIA (Rho-TIA). Conus tullpa (Fish-hunting cone snail) (Tulip cone).
                                                                    SEQUENCE
                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Mollusca; Gastropoda; Caenogastropoda; Neogastropoda; Conoidea; Conidae; Conus.
                                                                                              DISULFID
                                                                                                               PDB; lien;
                                                                                                                                                                              "Two new classes of conopeptides inhibit the alphal-adrenoceptor and
                                                                                                                                                                                                 Sharpe I.A., Gehrmann J., Loughnan M.L., Thomas L., Adams D
Atkins A., Palant E., Craik D.J., Adams D.J., Alewood P.F.,
                                                                                                                                                                                                                    MEDLINE::21419681; PubMed=11528421;
                                                                                                                                                                                                                               TISSUE=Venom
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REPEAT
                                                                                                      Foxin; Amidation; 3D-structure.
                                                                                                                      -!- SIMILARITY: BELONGS TO THE RHO-CONOTOXIN FAMILY
                                                                                                                                                                                                                                       SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
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5 CCLIPACRRNHKKFC
                2 CCSLPPCALNNPDYC
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                                 Similarity 6; Conserv
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8; Conser
                                                                                                                                                                                                                                     SYNTHESIS, AND STRUCTURE BY NMR
                                                                                                               03-APR-02.
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                                  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                    AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          988
1012
                                                                   2396 MW;
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40.0%;
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50.0%;
19
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                                                                                                                                                                                                                                                                                                                                                                                             16
                                                                 AMIDATION.
C5917DDE62CA89DC
                                                                                                                                                                                                                                                                                                                                                                                                               2; Mismatches
                                         Score 47; D
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                       Score 48; DB 1; Length 1046; Pred. No. 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          A-26.
A-27.
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A-18.
B-8.
A-19.
A-20.
B-9.
A-21.
A-21.
A-23.
A-23.
A-24.
A-25.
                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                 F9D6C04FD7D85818 CRC64;
                                         DB 1;
0.64;
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                                6;
                                                                   CRC64;
                                                Length 19;
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                                Indels
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                                0;
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RESULT 14
CXA1_CONTE
RESULT 15
TIM2_RABIT
ID TIM2_R
AC Q9TR27
AC Q9TR27
AC 30-MAY
DT 30-MAY
DT 16-OCT
DE Metall
DE Metall
GN TIMP2.
OS OTYCCO
OC Eukary
OC Mammal
RN [1]
RN [1]
RN [1]
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Matches 7
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16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Alpha-type conotoxin Txl precursor.
Conus textile (Cloth-of-gold cone).
Eukaryota; Metazoa; Mollusca; Gastropoda; Caenogastropoda;
Neogastropoda; Conoidea; Conidae; Conus.
                                                                                                                                                                                                                                                                                                                                                                       DISULFID MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Venom duct;
MEDLINE=20037955; PubMed=10573284;
                                                                                                        Q9TRZ7; O97589;
30-MAY-2000 (Rel. 39, Created)
16-CCT-2001 (Rel. 40, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
Metalloproteinase inhibitor 2 (TIMP-2) (Tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <del>+</del> <del>+</del> <del>+</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptides 20:1139-1144(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=6494;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CXA1_CONTE
                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lu B.-S., Yu F., Zhao D., Huang P.-T., Huang
"Conopeptides from Conus striatus and Conus
                                                       Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; (
                                                                                              metalloproteinases-2).
                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                           SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AF146352; AAD31912.1; -
                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                            TIM2_RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Acetylcholine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Postsynaptic neurotoxin;
  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                 PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                              ROPEP
                                                                                                                                                                                                                                                51
                                                                                                                                                                                                                                                                                                  Local Similarity es 7; Conserv
                                                                                                                                                                                                                                                                          2 CCSLPPCALNNPDYC 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE SPECIFICITY: Expressed by the venom duct. SIMILARITY: BELONGS TO THE A-SUPERFAMILY OF CONOTOXINS. ALPHA-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bind
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            oind to the nicotinic acetylcholine inhibit them (By similarity).
                                                                                                                                                                                                                                                CCSDPRCNSSHPELC 65
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22
49
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AA;
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1 21 POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                            7442
                                         Lagomorpha; Leporidae;
                                                                                                                                                                                                                                                                                                                 45.2%;
46.7%;
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55
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57
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                                                                                                                                                                                                                                                                                                    Score 47; DB Pred. No. 2.2; 3; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                    ALPHA-TYPE CONOTOXIN TX1
BY SIMILARITY.
BY SIMILARITY.
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                                                                                                                                                                             PRT;
                                                     Craniata; Vertebrata; Euteleostomi;
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                                                                                                                                                                             194 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Huang
                                                                                                                                                                                                                                                                                                                                                                       (G-67 PROVIDE AMIDE GROUP).
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2.2;
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                                         Oryctolagus
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textile
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                                                                                                            inhibitor
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Search completed: January Job time: 8.27273 secs
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Best Local S
Matches 8
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                                                                                                                                                                                                                                                                                                                                                  CONFLICT
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CONFLICT
CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Molecular cloning and characterization of rabbit TIMP2."; Inflamm. Res. 44:S121-S122(1995).
[2]
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF069713; AAC95005.1; HSSP; P16035; 1BR9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -i- PTM: THE ACTIVITY OF TIMP-2 IS DEPENDENT ON DISULFIDE BONDS (BY SIMILARITY).
-i- SIMILARITY: BELONGS TO THE TIMP FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AND IRREVERSIBLY INACTIVATES T-:- SUBCELLULAR LOCATION: Secreted-:- PTM: THE ACTIVITY OF TIMP-2 IS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Biochem. Biophys. Res. Commun.
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                                                                                           125
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                                                                                           GCECKITRCPMIPCYISSPDEC 146
                                                                                                                                         GC----CSLPPCALNNPDYC 16
                                                                                                                                                                                     Similarity
8; Conserv
                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nys. Res. Commun. 252:757-763(1998).
COMPLEXES WITH METALLOPROTEINASES (SUCH AS COLLAGENASES)
                                                                                                                                                                                                                                                                                                                          e inhibitor.
1 72
1 175
1 176
3 1175
3 1175
8 1175
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21849
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ls for proteinases
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5.7;
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Post-processing: Minimum Match 0%
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Listing first 45 summaries
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Sp_archea:*

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Gapop 10.0 , Gapext 0.5
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104
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138.766 Million cell updates/sec
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Copyright (c) 1993 - 2003 Compug
   sp_vertebrate:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

16	15	14	13	12	11	10	9	œ	7	6	ر ت	4	ω	2	ם		Result
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45.2	45.2	46.2	46.2	47.1	47.1	48.1	48.1	49.0	49.0	50.0	50.0	51.0	54.8	89.4	95.2	Macci	Query
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Q9TTB8	Q95KL8	Q20327	Q9ZHI4	Q9W4Y4	Q9NEF9	QBTCU1	Q9NV61	Q8YTE3	Q9WX38	Q94JK7	045993	Q9S255	027591	Q9BP56	Q9BP57		3
Q9ttb8 sus scrofa	Q95kl8 macaca mula	Q20327 caenorhabdi	Q9zhi4 chromobacte	Q9w4y4 drosophila	Q9nef9 drosophila	Q8tcul homo sapien	Q9nv61 homo sapien	Q8yte3 anabaena sp	Q9wx38 anabaena va	Q94jk7 oryza sativ	045993 caenorhabdi	Q9s255 streptomyce	027591 methanobact	Q9bp56 conus penna	Q9bp57 conus penna	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	Description

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44	44	44	44	44	44	44.5	44.5	44.5	44.5	45	45	45	45	45	45	45	45	45	45	45	46	46	46	47	47	47	47	47
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Q914Q3	091404	Q914Q5	Q914Q6	Q914Q7	Q914Q8	Q60718	Q9QWJ0	Q9D4G3	Q8S7C8	Q96RM4	096009	Q9W2C6	Q9P2K5	Q9н922	Q9Y655	Q8QZZ1	Q8RSE1	Q60690	Q17002	Q9xcc9	Q22378	Q8U915	Q9KN81	Q9GTJ6	Q99J35	Q97HN1	P87580	Q925Q6
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ALIGNMENTS

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RESULT 1
Q9BP57
 RESULT 2
Q9BP56
ID Q9BP
AC Q9BP
DT 01-J
DT 01-J
DT 01-J
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Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                      Conotoxin scaffold I.

Conus pennaceus (Feathered cone).

Eukaryota; Metazoa; Mollusca; Gastropoda; Caenogastropoda;

Neogastropoda; Conoidea; Conidae; Conus.

NCBI_TaxID=37335;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Q9BP56; PRELIMINARY; PRT; 61 AA. Q9BP56; 01-JUN-2001 (TrEMBLrel. 17, Created) 01-JUN-2001 (TrEMBLrel. 17, Last sequence update) 01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                        "Mechanisms for Evolving Hypervariability: The Case of Conopeptides."; Mol. Biol. Evol. 18:120-131(2001).

EMBL; AFZ15088; AAG60509.1; -.

HSSP; P50988; IAKG.

SEQUENCE 61 AA; 6363 MW; 42E00333324D66922 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9BP57
                                                                                                                                                                                                                                                                                                                                  Conticello S.G., Gilad Y., Avidan N., Ben-Asher E., Fainzilber M.;
                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. MEDLINE=21105969; PubMed=11158371;
                                                                                                                                       45
                                                                                                                                                       1 GCCSLPPCALNNPDYC 16
                                                                                                                                       GCCSLPPCALSNPDYC 60
                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                               95.2%;
93.8%;
                                                                                                                                                                                                Score 99; DB 5; Length 61; Pred. No. 5.4e-09; Indels 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 AA.
   update)
                                                                                                                                                                                                                             Length 61;
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                                                                    Q9S255
                                                                                      RESULT 4
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                                                                                                                                                                                                                                                                                                                                                           A Smith D.R., Doucette-Stamm L.A., DeLoughery C., Lee H.-M., Dubois J.,
A Aldredge T., Bashirzadeh R., Blakely D., Cook R., Gilbert K.,
A Harrison D., Hoang L., Keagle P., Lumm W., Potthier B., Qiu D.,
A Spadafora R., Vicare R., Wang Y., Wierzbowski J., Gibson R.,
Jiwani N., Caruso A., Bush D., Safer H., Patwell D., Prabhakar S.,
A McDougall S., Shimer G., Goyal A., Pietrovski S., Church G.M.,
Complete genome sequence of Methanobacterium thermoautotrophicum
Complete genome sequence
                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                 Matches
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Best Local
                      Q9S255;
    01-MAY-2000
                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                Complete proteome
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Archaea; Euryarchaeota;
Methanobacteriaceae; Me
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conus pennaceus (Feathered cone).
Eukaryota; Metazoa; Mollusca; Gastropoda
Neogastropoda; Conoidea; Conidae; Conus.
NCBI_TaxID=37335;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=187420;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Methanobacterium thermoautotrophicum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MTH1548
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NADP-reducing hydrogenase, subunit A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conticello S.G., Gilad Y., Avidan N.,
Fainzilber M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=21105969; PubMed=11158371;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conotoxin scaffold I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mechanisms for Evolving Hypervariability: The Case of Conopeptides."; wol. Biol. Evol. 18:120-131(2001).
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                                                                                                                                                                                                                                            Local Similarity
les 9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45
                                                                                                                                                                                               1 GCCSLPPCALNNPD 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GCCSLPPCALNNPDYC 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biol. Evol. 18:120-111,
Biol. Evol. 18:120-111,
5; AF215089; AAG60510.1;
6: P50985; IAKG.
                                                                                                                                                      GCCSLAPCAMVNDE 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCSRPPCALSNPDYC 60
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                                                                                                                                                                                                                                                                                                                                149 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 AA;
(TrEMBLrel. 13,
                                             PRELIMINARY;
                                                                                                                                                                                                                                            Conservative
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                                                                                                                                                                                                                                                                                                                            16433 MW;
                                                                                                                                                                                                                                                          54.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ta; Methanobacteria; Methanobacteriales;
Methanothermobacter.
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87.5%;
  Created)
                                                                                                                                                                                                                                     Score 57; DB
Pred. No. 0.09
2; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gastropoda; Caenogastropoda;
                                                                                                                                                                                                                                                                                                                         351133767604DF9D CRC64;
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                                           175
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                                                                                                                                                                                                                                                            DB 17; Length 149;
0.094;
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                                                                                                                                                                                                                                     0;
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Best Local :
                                                                    045993 PRELIMINARY;
045993; 062282;
01-JUN-1998 (TEMBLTel.)
01-NOV-1998 (TEMBLTel.)
01-DEC-2001 (TremBLTel.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-A3(2) / M145;
Bentley S.D., Chater K.F., Cerdeno-Tarraga A.-M., Challis G.L.,
Thomson N.R., James K.D., Harris D.E., Quail M.A., Kieser H.,
Harper D., Bateman A., Brown S., Chandra G., Chen C.W., Collins M.,
Cronin A., Fraser A., Goble A., Hidalgo J., Hornsby T., Howarth S.,
Cronin A., Fraser A., Goble A., Hidalgo J., Hornsby T., O'Neil S.,
Huang C.-H., Kieser T., Larke L., Murphy L., Oliver K., O'Neil S.,
Eukaryota; Metazoa; Nemat
Rhabditidae; Peloderinae;
                          Caenorhabditis elegans.
                                           H02K04.1
                                                     H02K04.1 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "A set of ordered cosmids and a detailed genetic and physical map the 8 Mb Streptomyces coelicolor A3(2) chromosome."; Mol. Microbiol. 21:77-96(1996).
                                                                                                                                                                                                                                                                                                                 DNA-binding; Transcription regulation SEQUENCE 175 AA; 19358 MW; 27E0000
                                                                                                                                                                                                                                                                                                                                                                                                                                coelicolor A3(2).";
Nature 417:141-147(2002)
-!- SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rabbinowitsch E., Rajandream M.A., Rutherford K., Rutter S., Seeger K., Saunders D., Sharp S., Squares R., Squares S., Taylor Warren T., Wietzorrek A., Woodward J., Barrell B.G., Parkhill J.,
                                                                                                                                                                                                     122
                                                                                                                                                                                                                                                                                                                                            PRINTS; PR00040; HTHMERR. SMART; SM00422; HTH_MERR; 1.
                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AL096811; CAB46795.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases
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Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Bacteria; Firmicutes; Actinobacteria; Streptomyces.
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01-JUN-2002 (TrEMBLrel. 21, Last annotation updat
Putative soxR-like transcriptional regulator.
SCO1697 OR SCI30A.18C.
                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Complete genome sequence of the model actinomycete Streptomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hopwood D.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=97000351; PubMed=8843436;
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                                                                                                                                                                                                                             1 GCCSLPPCALNNPD 14
                                                                                                                                                                                                                                                           Local Similarity es 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                      REGULATORS.
                                                                                                                                                                                                 GCLSLETCVLSNPD
                                                                                                                                                                                                                                                                                                                                                                            PF00376; merR;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                        IPR000551;
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(JUL-1999) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                175 AA;
                                                                   (TrEMBLrel. 06, Created)
(TrEMBLrel. 08, Last seq
(TrEMBLrel. 19, Last ann
                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                           Conservative
              Nematoda;
                                                                                                                                                                                                                                                                       51.0%;
64.3%;
                                                                                                                                                                                                                                                                                                                                                                                        HTH_MerR
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oda; Chromadorea;
Caenorhabditis.
                                                                                                                             PRT;
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                                                                    Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                          Pred.
                                                                                                                                                                                                                                                                                   Score 53;
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                                                                                                                                                                                                                                                                                                                                                                                                                                  MERR FAMILY
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                                                                                                                                                                                                                                                                          No.
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                                                                                                                                                                                                                                                                                   DB 16;
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             Rhabditida; Rhabditoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                  OF TRANSCRIPTIONAL
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                                                                                                                                                                                                                                                                                   Length 175;
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RESULT
Q94JK7
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QΥ
                             Query Match
Best Local S
Matches 9
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Best Local
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Q1-DEC-2001 (TrEMBLrel. 1
Q1-DEC-2001 (TrEMBLrel. 1
Q1-JUN-2002 (TrEMBLrel. 2
P0434B04.16 protein.
P0434B04.16
                                                                         Clone:P0434B04.";
clone:P0434B04.";
clone:P0434B04.";
submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases
EMBL; AP002540; BAB43995.1;
serurence 590 AA; 66477 MW; BCA77D10C9530E8B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; 281142; CAB03511.1; JOINED.
EMBL; AL023813; CAAB03511.1; JOINED.
EMBL; AL023813; CAA19425.1; -
EMBL; 281142; CAA19425.1; JOINED.
InterPro; IRR001304; Lectin_C.
Pfam; PF00059; lectin_C; 1.
SMART; SM00034; CLECT; 1.
SMART; SM00034; CLECT; 1.
SMART; P850041; C_TYPE_LECTIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wilson R., Ainscough R., Anderson K., Baynes C., Berks M.,
Bonfield J., Burton J., Connell M., Copsey T., Cooper J., Coulson A.,
Craxton M., Dear S., Du Z., Durbin R., Favello A., Fulton L.,
Gardner A., Green P., Hawkins T., Hillier L., Jier M., Johnston L.,
Jones M., Kershaw J., Kirsten J., Laister N., Latrelle P.,
Jones M., Kershaw J., Kirsten J., Laister N., Latrelle P.,
Lightning J., Lloyd C., Mcmurray A., Mortimore B., O'Callaghan M.,
Parsons J., Percy C., Rifken L., Roopra A., Saunders D., Shownkeen R.,
Banaldon N., Smith A., Sonnhammer E., Staden R., Sulston J.,
Thierry-Mieg J., Thomas K., Vaudin M., Vaughan K., Waterston R.,
Watson A., Weinstock L., Wilkinson-Sproat J., Wohldman P.,
                                                                                                                                                                                                                                        Oryza sativa (Rice).
Eukaryota; Viridiplantae; Streptophyta; En
Spermatophyta; Magnoliophyta; Liliopsida;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                STRAIN=CV. NIPPONBARE;
Sasaki T., Matsumoto T., Yamamoto K.;
                                                                                                                                                                                                                                                                                                                                                                                             Q94JK7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nature 368:32-38(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "2.2 Mb of contiguous nucleotide sequence from chromosome III of C
elegans.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=94150718; PubMed=7906398;
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                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                           NCBI_TaxID=4530;
                                                                                                                                                  "Oryza sativa nipponbare(GA3) genomic DNA, chromosome 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       102 CAAPPCAVTDPPVC
                          Local Similarity
les 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 CSLPPCALNNPDYC 16
   GCCSLPPCALNNPDY 15
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7; Conserv
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                                           50.0%;
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19,
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Last annotation update)
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                             2;
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Pred. No.
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                                        DB
2.2;
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                                                                                                                                                                                                                                                           Poales; Poaceae;
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                                                           Length 590;
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RESULT
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Best Local
                                             Matches
                                                                    Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Conservation of structure and cold-regulation of RNA-binding proteins in cyanobacteria: probable convergent evolution with eukaryotic glycine-rich RNA-binding proteins.";

NNA-binding proteins.";

Nucleic Acids Res. 27:2029-2036(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1999 (TrEMBLrel.
01-NOV-1999 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                                                "Yasuda M., Tabata S.;
"Complete genomic sequence of the filamentous nitrogen-fixing cyanobacterium Anabaena sp. strain PCC 7120.";
DNA Res. 8:205-213(2001).
EMBL; AP003590; BAB74475.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Anabaena variabilis.
Bacteria; Cyanobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9WX38
                                                                                                                                                                       Watanabe A., Iriguchi M., Ishikawa A., Kawasnima I
Kishida Y., Kohara M., Matsumoto M., Matsuno A., I
Nakazaki N., Shimpo S., Sugimoto M., Takazawa M.,
                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE=21595285; PubMed=11759840;
                                                                                                                                                                                                                                                                      Anabaena sp. (strain PCC 7120).
Bacteria; Cyanobacteria; Nostocales; Nostocaceae; Nostoc.
                                                                                                                                                                                                                                                                                                                     01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                            Q8YTE3;
01-MAR-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=99216503; PubMed=10198437; Maruyama K., Sato N., Ohta N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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                                                                                           SEQUENCE
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                                                                                                                                                                                                                                                                                                          Hypothetical protein All2776.
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                                                                                          Hypothetical protein; Complete SEQUENCE 386 AA; 41775 MW;
                                                                                                                                                                                                                                                           NCBI_TaxID=103690;
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 108 CAVPPCLLSVPEAC 121
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                                                        Local
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                      CSLPPCALNNPDYC 16
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ER 291 291
                                                                                                                                                                                                 T., Nakamura Y., Wolk C.P., Kuritz T., Sas
be A., Iriguchi M., Ishikawa A., Kawashima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 7; Conserv
                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          291 AA;
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50.0%;
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Last annotation updat
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Pred. No.
                                               Pred. No. 2.2
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                                                                                           proteome.
261618991B197C61 CRC64;
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1.7;
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ima K., Kimura T.,
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Q9NEF9
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Q8TCU1
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Q9NV61
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Best Local :
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Best Local
 Q9NEF9;
01-OCT-2000
01-OCT-2000
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O9NV61;
O1-OCT-2000 (TrEMBLrel. 15, L
O1-DEC-2001 (TrEMBLrel. 15, L
O1-DEC-2001 (TrEMBLrel. 19, L
OVARC1000060 protein
Homo sapiens (Human)
                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

Liu Y., Emilion G., Mungall A.J., Dunham I., Beck S.,

LeMeuth-Metzinger V., Shelling A.N., Charnock F.M., Ganesan T.S.;

"Physical and transcript map of the region between D6S264 and D69

"Physical and transcript map of the region of allele loss in ovarian
                                         Q9NEF9
                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DECURINCE FINAL CONTROL OMA;
TISSUE-OVARIAN CARCINOMA;
ISOgai T., Ota T., Hayashi K., Sugiyama T., Otsuki T., Suzuki Y.,
Isogai T., Ota T., Hayashi K., Sugiyama T., Otsuki T., Fujimori K.,
Nishikawa T., Nagai K., Sugano S., Ishibashi T., Fujimori K.,
Tanai H., Kimata M., Watanabe M., Hiraoka S., Ishii S., Kawai Y.,
Tanai H., Kimata M., Watanatsu A., Nakamura Y., Nagahari K.,
                                                                                                                                                                                                                                                                                                                                                                                         01-JUN-2002 (TrEMBLrel. 21, 01-JUN-2002 (TrEMBLrel. 21, 01-JUN-2002 (TrEMBLrel. 21, Extra-cellular ribonuclease.
                                                                                                                                                                                                       SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8TCU1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "NEDO human cDNA sequencing project.";
Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases
EMBL; AK001769; BAA91896.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                 RNASE6PL.
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                                                                                                    134 GGCALPPAALPSGDLC 149
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                                                                                                                                                     Local Similarity
nes 9; Conserv
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                                                                                                                           1 GCCSLPPCALNNPDYC 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GCCSLPPCALNNPDYC
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9; Conserv
                                                                                                                                                                                                     240 AA;
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 (TrEMBLrel. (TrEMBLrel.
                                        PRELIMINARY;
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; Primates;
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56.2%;
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                                        PRT;
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Matches
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InterPro; IPR000304; Laminin_B.
InterPro; IPR00034; Laminin_EGF.
InterPro; IPR002172; LDL_recept_A.
Pfam; P200047; ig; 2.
Pfam; P200052; laminin_B; 3.
Pfam; P200052; laminin_B; 4.
Pfam; P200057; ldl_recept_a; 23.
Pfam; P200057; ldl_recept_a; 23.
PRINTS; PR00011; EGFLAMININ.
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ProDom; PD003031; Laminin_B; 3.
SMART; SM00180; EGF_Lam; 2.
SMART; SM00001; EGF_11ke; 3.
SMART; SM00408; IGC2; 2.
SMART; SM00281; LamB; 3.
SMART; SM00192; LDLB; 23.
SMART; SM00192; LDLB; 23.
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Q9W4Y4;
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PROSITE;
PROSITE;
                                                                                   Pcan protein.

PCAN OR EG:BACR25B3.11 OR CG7981.

Drosophila melanogaster (Fruit fly).

Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Eukaryota; Neoptera; Endopterygota; Diptera; Brachycera; Muscretrygota; Neoptera; Ne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE:
                        Ephydroidea; Dro
NCBI_TaxID=7227;
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01-MAR-2001 (TIEMBLIFEL 16,
01-JUN-2002 (TIEMBLIFEL 21,
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01-MAR-2001
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EG:BACR25B3.1 protein.
EG:BACR25B3.1.
Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; He
Pterygota; Neoptera; Endopterygota; Diptera;
Ephydroidea; Drosophilidae; Drosophila.
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Murphy L., Harris D., I
"Sequencing the distal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EGF-like
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InterPro; IPR003598;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GCCSLPPCALNNPDYC 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSCSLCPCDVSNTESC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; AL138972;
; Q07954; 1C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                e domain; Glycoprotein; Immunoglobulin domain;
EGF-like domain; Repeat.
E 2447 AA; 270120 MW; 3DAE695C54090ED4 CRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PS00094; C5_MTASE_1; UNKNOWN_1.
PS00022; EGF_1; UNKNOWN_7.
PS01186; EGF_2; 4.
PS01248; LAMININ_TYPE_EGF; 7.
PS01209; LDLRA_1; 20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PS50068; LDLRA_2; 23.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (FEB-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _{\rm NS} the distal X chromosome of Drosophila melanogaster."; (FEB-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                           Drosophilidae; Drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1CR8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAB72286.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47.1%;
50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EGF-like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ig_c2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Barrell B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EG:BACR25B3.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _DNA_meth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19, Last annotation update)
                                                                                                                                                                                                                                                               Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 49; DB
Pred. No. 25;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3DAE695C54090ED4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                   4072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5,
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                                                                                                                                                                                                                                                               update)
                                                                                          Brachycera; Muscomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brachycera; Muscomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Insecta;
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RA Brandon R.C., MoLLMAN J.K., Idnucli M.D., Zhang Q., Chen L.X.,
RA Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Abril J.F., Agbayani A., An H.-J., Andrews-Ffannkoch C., Baldwin D.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Becson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Kimmel B.E., McIntosh T.C., McLeod M.P., McPherson D.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Melson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Rahert K., Menday A.C., Stapleton M., Stupski M.P., Smith T.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Palazzolo M., Pittman G.S., Pan M., Stupski M.P., Smith T
                                                                                                                                   Pfam: PF00057; Idl_recept_a; 23.
PRINTS; PR00261; LDLRECEPTOR.
ProDom; PD003031; Laminin_B; 3.
SMART; SM00180; EGF_Lam; 2.
SMART; SM00001; EGF_Like; 5.
SMART; SM00408; IGC2; 7.
SMART; SM00410; IG_like; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-BERKELE;
MEDLINE-20196006; PubMed=10731132;
MEDLINE-20196006; PubMed=10731132;
Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
Amanatides P.G., Scherer S.E., Richards S., Ashburner M., Henderson S.N.,
George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhange M., Pfeliffer B.D.,
                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000504;
                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR00217
                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
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FlyBase; FBgn0027946;
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                                                                                                                                                                                                                                                                                PF00047; ig; 12.
PF00052; laminin_B; 3.
PF00053; laminin_EGF; 4
PF00054; laminin_G; 3.
                                                                                SM00192; LDLa; 23
                 PS00094; C5_MTASE_1; UNKNOWN_1.
PS00022; EGF_1; UNKNOWN_10.
PS01186; EGF_2; 6.
PS01248; LAMININ_TYPE_EGF; 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR000561; EGF-
; IPR000742; EGF-
; IPR003598; Ig_c;
; IPR003600; Ig_l;
                                                                                                                                                                                                                                                                                                                                                                                                         IPR003006;
IPR000034;
IPR002049;
IPR001791;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR001525;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N.A.
                                                                                                    LamG;
                                                                                                                     LamB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ig_like.
Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                 LDL_recept_A.
RNA_rec_mot.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EGF-like.
                                                                                                                                                                                                                                                                                                                                                                                                           Laminin_G.
                                                                                                                                                                                                                                                                                                                                                                                                                          Laminin_EGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Laminin_B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _DNA_meth
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RESULT 14
Q20327
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Best Local Similarity
""" on best of the conserve 
       B
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DR
KW
SQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                Eukaryota; Metazoa; Nematoda; Chromadorea;
Rhabditidae; Peloderinae; Caenorhabditis.
NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                 01-NOV-1996 (TrEMBLrel. 01, Cr. 01-NOV-1996 (TrEMBLrel. 01, La. 01-MAR-2002 (TrEMBLrel. 20, La. Hypothetical 27.7 kDa protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9ZHI4;
01-MAY-1999 (TrEMBLrel.
01-MAY-1999 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS01209; LDLRA_1; 20.
PROSITE; PS0068; LDLRA_2; 23.
PROSITE; PS00030; RRM_RNP_1; UNKNOWN_1.
EGF-like domain; Glycoprotein; Immunoglobulin domain;
Laminin EGF-like domain; Repeat.
SEQUENCE 4072 AA; 449813 MW; 7AE8AA54B5C0A19B CRC
                                                                                                                                                                                                                        Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                              Q20327;
                                                                                                                                                                                                                                                                                                                                                                                                  Q20327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00552; HTH_MERR_FAMILY; 1.
DNA-binding; Transcription regulation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00040; HTHMERR. SMART; SM00422; HTH_MERR; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGULATORS.
EMBL; AF061445; AAC69613.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (APR-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bacteria; Proteobacteria; beta subdivision; Neisseriaceae; Chromobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2246 GSCSLCPCDVSNTESC 2261
                                                STRAIN=BRISTOL N2;
MEDLINE-99069613;
                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000551; HTH_MerR.
Pfam; PF00376; merR; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Chromobacterium violaceum genomic fragment containing orfD (soxR/merR homolog).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. Kolibachuk D.J., E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=536;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chromobacterium violaceum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9ZHI4
Genome sequence of the nematode C. elegans: a platform for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity hes 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GCCSLPPCALNNPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GCCSLPPCALNNPDYC 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCLSLERCKLYNPD 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        148 AA;
                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dennis D.E.;
                                                   PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16441 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              47.1%;
50.0%;
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. 19, Last anno
                                                                                                                                                                                                                                                                                   01, Created)
01, Last sequence update)
20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
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Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 49;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 48; I
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16805040BA7C0827 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7AE8AA54B5C0A19B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                  250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           148 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2; Length 148;
2.8;
                                                                                                                                                                                              Rhabditida; Rhabditoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 4072;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
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RESULT
Q95KL8
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Search completed: January 8, 2003, 15:29:57 Job time: 26.7576 secs
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Best Local S
Matches 9
                                                                                                                   Best Local Similarity
Matches 8; Conserv
                                                                                                                                              Query Match
                                                                                                                                                                                       TISSUE-PLACENTA;

Ji S., Wang Y., Li H., Ji W., Piao Y.;

Ji S., Wang Y., Li H., Ji W., Piao Y.;

"Cloning and characterization of tissue inhibitor of matrix metalloproteinase-2 (TIMP-2) cDNA from Macaca mulatta.";

Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AR366398; AAK33705.1; -.

InterPro; IPR001820; TIMP.

Pfam; PF00965; TIMP; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Q95KL8 PRELIMINARY; PRT; 97 AA.
Q95KL8;
Q1-DEC-2001 (TrEMBLrel. 19, Created)
Q1-DEC-2001 (TrEMBLrel. 19, Last sequence update)
Q1-MAR-2002 (TrEMBLrel. 20, Last annotation update)
Tissue inhibitor of matrix metalloproteinase-2 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Waterston R.;
"Direct Submission.";
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; U40799; AAA81484.1;
InterPro; IPR001467; Prok_Mboxred.
PROSITE; PS00551; MOLYBDOPTERIN_PROK_1; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Du Z.;
"The sequence of C. elegans cosmid F42C5.";
"The sequence of C. elegans cosmid F42C5.";
Submitted (NOV-1995) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                Macaca mulatta (Rhesus macaque).

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Butheria; Primates; Catarrhini; Cercopithecidae;

Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       investigating biology. The C. elegans Sequencing Consortium.";
Science 282:2012-2018(1998).
[2]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hypothetical protein. SEQUENCE 250 AA; 27685 MW;
                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                           TIMP-2.
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STRAIN-BRISTOL N2;
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                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9544;
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                                                                                      1 GC-----CSLPPCALNNPDYC 16
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                                                        GCECKITRCPMIPCYISSPDEC
                                                                                                                                                                             97 AA; 11224 MW; 1AA2387A2802533C CRC64;
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36.4%;
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50.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1984.DAT:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being prinand is derived by analysis of the total score distribution. being printed,

SUMMARIES

Result	Score	Query Match	Query Match Length DB	DB	ID	Description
ъ	38	69.1	42	21	AAB21603	Cone snail alpha-c
N	37	67.3	16	20	AAY24157	Alpha-conotoxin pe
ω	37	67.3	16	20	AAY09521	Alpha conopeptide
4	36	65.5	16	20	AAY24160	Alpha-conotoxin pe
ហ	36	65.5	16	20	AAY24162	Alpha-conotoxin pe
σ	36	65.5	16	20	AAY09524	Alpha conotoxin pe
7	36	65.5	16	20	AAW89493	Conopeptide AuIA.
8	36	65.5	16	20	AAW89495	Conopeptide AuIC.
9	36	65.5	17	20	AAY24166	Alpha-conotoxin pe
10	36	65.5	39	21	AAB21590	Cone snail alpha-c

443 443	37 38 39 40	3 3 3 3 3 3 4 3 3 3 4 4 3 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	30 30 30 30 30 30	18 19 20 21 22 23	11 12 14 15
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AAB21605 AAB21609 AAB21631 AAB21601	ABB04156 ABB04167 AABB21621 AAB21619 AAB21625	AAW89492 AAW24156 AAB21436 AAW87520 AAY84657 AAY84658	AAW12736 AAW12737 AAW12741 AAW57903 AAW57903 AAY24159 AAY24167 AAY24167	AAK/52/5 AAR75279 AAW24899 AAW24881 AAW24882 AAW24882	AAB21591 AAB21597 AAB21624 AAB21427 AAB21616 AAR75274
snail alpha- snail alpha- snail alpha- snail alpha-	Gamma-carboxygluta Cone snail conopep Cone snail alpha-c Cone snail alpha-c Cone snail alpha-c	חו מח	A-lineage conotoxi A-lineage conotoxi A-lineage conotoxi Conotoxin peptide Alpha-conotoxin pe Alpha-conotoxin pe Alpha-conotoxin pe		ne snail ne snail ne snail ne snail ne snail

ALIGNMENTS

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AAB21603
                                                                                                                                                RESULT 1
                                                                                                         AAB21603 standard; Peptide; 42 AA
Cone snail alpha-conotoxin SEQ ID NO: 334.
                                    19-JAN-2001
                                  (first entry)
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Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder; neuronal nicotthnic acetylcholine receptor; cardiovascular disorder; gastric motility disorder; urinary incontinence; nicotine addiction; small cell lung carcinoma.

Conus lividus.

WPI; 2000-505965/45. N-PSDB; AAA89499. Watkins M, Olivera BM, 03-AUG-2000 WO200044776-A1 (UTAH) UNIV UTAH RES FOUND (COGN-) COGNETIX INC. 29-JAN-1999; 28-JAN-2000; 2000WO-US01979 99US-0118381 Hillyard DR, McIntosh JM, Jones RM;

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Дb
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snail. These peptides are found in minute quantities in the venom of the snails, and are targeted at the neuronal nicotinic acetylcholine receptors of the nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic acetylcholine receptors, including cardiovascular disorders, gastric acetylcholine receptors, including cardiovascular disorders, gastric
               The present sequence represents a specifically claimed example of an alpha-conotoxin from the general formula given in AAY24155, which can used to treat disorders regulated at neuronal nicotinic acetylcholine
                                                                                                                                                                                                                                                                                                                                                                                                                                  small cell lung carcinoma; cardiovascular disorder; nicotine ad gastric motility disorder; urinary incontinence; mood disorder; bipolar disorder; unipolar depression; dysthymia;
    receptors (nAChR).
                                                                            Claim 12;
                                                                                                      at neuronal nicotinic acetylcholine
                                                                                                                                                                                                                                        03-APR-1998;
31-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                          Conus magus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alpha-conotoxin; neuronal nicotinic acetylcholine receptor; nAChR; small cell lung carcinoma; cardiovascular disorder; nicotine addic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      motility disorders, urinary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and seasonal affective disorder, and small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 39;
                                                                                                                       Alpha-conotoxin peptides that are
                                                                                                                                                                                 Cartier GE,
                                                                                                                                                                                                                                                                                      23-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                       seasonal effective disorder.
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                                                                                                                                                                                                                                                                                                                  08-JUL-1999
                                                                                                                                                                                                                                                                                                                                               WO9933482-A1
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5; Conser
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                                                                           Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                 Luo
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                                                                         27; 40pp;
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97US-0070153
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The alpha-conotoxins are useful for
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                                                                                                                                                                                 McIntosh
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33.3%;
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Pred. No.
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                                                                                                        receptors
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                                                                                                                     disorders regulated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 42;
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RESULT 3
AAY09521
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pharmaceutical composition for treating disorders regulated at neuronal nAchR, especially alpha 3 beta 2, alpha 3 beta 4 or alpha 7-containing nAchR. Disorders that can be treated include cardiovascular disorders, a gastric motility disorder, urinary incontinence, nicotine addiction, a mood disorder or small cell lung carcinoma. Mood disorders include bipolar disorder, unipolar depression, dysthymia and seasonal effective disorder. The alpha-conotoxins can also be used for diagnosis of small cell lung carcinoma. The alpha-conotoxin antagonists are able to disordininate between non-symmetrical ligand binding interfaces present on the nAchR. The alpha-conotoxin has the ability to potently block any receptor containing a alpha beta subunit interface, regardless of what other subunits may be present in the receptor complex.
                                                                                                                                                                                           (SALK )
(UYCA-)
(UTAH )
                                                                                                                                                                                                                                                                                                                                                                                                                                           Alpha conopeptide MII; alpha-4/7 conotoxin; cardiovascular agent; neuronal nicotinic acetylcholine receptor; small cell lung carcinoma; detection; gastric motility; urinary incontinence; anti-smoking agent
                                                                                                                                  WPI; 1999-326687/27.
                                                                                                                                                                      Cartier GE,
                                                                                                                                                                                                                                                                                                                      06-MAY-1999
                                                                                                                                                                                                                                                                                                                                             W09921878-A1
                                                                                                                                                                                                                                                                                                                                                                    Disulfide-bond
Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alpha
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY09521 standard; peptide; 16 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                       Derivatives of alpha-conotoxin and their analogues
                                                                                                                                                           Rivier JE,
                                                                                                                                                                                                                                                                                                                                                                                             Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-JUL-1999
                                                                                                                                                                                                                     (COGN-) COGNETIX INC. (SALK ) SALK INST.
                                                                                                                                                                                                                                                          24-0CT-1997;
                                                                                                                                                                                                                                                                      14-NOV-1997;
                                                                                                                                                                                                                                                                                             23-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCXXPXCXXXXXXXC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCSNPVCFATHSNLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           conopeptide
                                                                                                                                                                                             UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 5; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16
                                                                                                                                                          Shen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                             CASE
                                                                                                                                                         Koerber SC, Mc
shen GS, Shonk,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA;
                                                                                                                                                                                                                                                         97US-0065814.
97US-0062783.
                                                                                                                                                                                                                                                                                              98WO-US22368
                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
2..8
3..16
                                                                                                                                                                                              WESTERN RESERVE
RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MII chimera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67.3%;
33.3%;
                                                                                                                                                                      McIntosh JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
Pred.
                                                                                                                                                           Yoshikami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NO:3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
51;
                                                                                                                                                           Ö
                                                                                                                                                                      Olivera BM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                            anti-smoking agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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0

The present invention describes derivatives (I) of alpha-conotoxin MII (II), an alpha-4/7 conotoxin peptide, with practically the same activias (II), (I), and its mimetics, are useful as cardiovascular agents; for treating or diagnosing small-cell lung carcinoma; and as gastric motility, urinary incontinence and anti-smoking agents. (I) and their

same activity

ç

be selective for particular

Example 11;

Page 51; 176pp; English.

밁 Ωy

Ν

3 CCXXPXCXXXXXXXC CCSYPPCFATNSDYC 16

17

Best Local Similarity
Matches 5; Conserv

Conservative

0,

33.3%;

Pred. No.

ed. No. 70; Mismatches

10;

Indels

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Gaps

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                        depression, dysthymia and seasonal effective disorder. The alpha-
conotoxins can also be used for diagnosis of small cell lung carcinoma.
The alpha-conotoxin antagonists are able to discriminate between non-
symmetrical ligand binding interfaces present on the nAChR. The alpha-
conotoxin has the ability to potently block any receptor containing a
alpha beta subunit interface, regardless of what other subunits may be
                                                                                                                        disorders regulated at neuronal naChR, especially alpha 3 beta 2, alpha 3 beta 4 or alpha 7-containing naChR. Disorders that can be treated include cardiovascular disorders, a gastric motility disorder, urinary incontinence, nicotine addiction, a mood disorder or small cell lung carcinoma. Mood disorders include bipolar disorder, unipolar depression, dysthymia and seasonal effective disorder. The alpha-
                                                                                                                                                                                                                       The present sequence represents a specifically claimed example of an alpha-conotoxin, which can be used to treat disorders regulated at neuronal nicotinic acetylcholine receptors (nAChR). The alpha-conotoxins are useful for preparing a pharmaceutical composition for treating
                                                                                                                                                                                                                                                                                                                Claim 28; Page 6; 40pp; English.
                               present in
                                                                                                                                                                                                                                                                                                                                               Alpha-conotoxin peptides that are used to treat at neuronal nicotinic acetylcholine receptors
                                                                                                                                                                                                                                                                                                                                                                                                                                    Cartier GE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alpha-conotoxin; neuronal nicotinic acetylcholine receptor; nAchr; small cell lung carcinoma; cardiovascular disorder; nicotine addiction; gastric motility disorder; urinary incontinence; mood disorder; bipolar disorder; unipolar depression; dysthymia;
                                                                                                                                                                                                                                                                                                                                                                                                      WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-APR-1998;
31-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UTAH ) UNIV UTAH RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-DEC-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conus aulicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seasonal effective disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alpha-conotoxin peptide SEQ ID NO:5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY24160;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY24160 standard; peptide; 16 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           neuronal nicotinic acetylcholine receptor, particularly the alpha 3 beta 2 and alpha 3 beta 4 subtypes. The present sequence represents a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide from an example from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
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                                                                                                                                                                                                                                                                                                                                                                                                     1999-405367/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 5; Conserv
                              the receptor complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Luo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0080588
97US-0070153
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                                                                                                                                                                                                                                                                                                                                                                                                                                   McIntosh JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67.3%;
33.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 37; DB Pred. No. 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                               Olivera BM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                                                                                                              disorders regulated
                                                                                                                                                                                                                                                                                                                                                                                                                                 Yoshikami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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Query Match

65.5%;

Score 36;

DB 20;

Length 16

B ρy

2 CCSYPPCFATNSGYC

3 CCXXPXCXXXXXXXC

0;

Sequence

16 AA;

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RESULT 5
AAY24162
        Matches
                                   Query Match
                                                                                                      treated include cardiovascular disorders, a gastric motility disorder, urinary incontinence, nicotine addiction, a mood disorder or small cell lung carcinoma. Mood disorders include bipolar disorder, unipolar depression, dysthymia and seasonal effective disorder. The alphaconotoxins can also be used for diagnosis of small cell lung carcinoma. The alphaconotoxin antagonists are able to discriminate between nonsymmetrical ligand binding interfaces present on the nAChR. The alphaconotoxin has the ability to potently block any receptor containing a alpha beta subunit interface, regardless of what other subunits may be
                                                                                                                                                                                                                                                                                          The present sequence represents a specifically claimed example of an alpha-conotoxin, which can be used to treat disorders regulated at neuronal nicotinic acetylcholine receptors (nAChR). The alpha-conotoxins
                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                           Claim 28; Page 6; 40pp; English.
                                                                                                present in
                                                                                                                                                                                                                                                                                                                                                                                          at neuronal nicotinic acetylcholine receptors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cartier GE,
                                                                                                                                                                                                                                               disorders regulated at neuronal nAChR, especially alpha 3 beta 2, alpha 3 beta 4 or alpha 7-containing nAChR. Disorders that can be
                                                                                                                                                                                                                                                                                are useful for preparing a pharmaceutical composition for
                                                                                                                                                                                                                                                                                                                                                                                                         Alpha-conotoxin peptides that are used to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-APR-1998;
31-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gastric motility disorder; urinary incontinence; mood disorder;
bipolar disorder; unipolar depression; dysthymia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UTAH ) UNIV UTAH RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-DEC-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9933482-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conus aulicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          seasonal effective disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alpha-conotoxin; neuronal nicotinic acetylcholine receptor; nAChR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alpha-conotoxin peptide SEQ ID NO:8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY24162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY24162 standard;
                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cell lung carcinoma;
      Similarity
5; Conser
                                                                  16 AA;
                                                                                              the receptor complex.
      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Luo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0080588
97US-0070153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98WO-US27367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide;
                   65.5%;
33.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       McIntosh JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cardiovascular disorder; nicotine addiction;
      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16
                   Score 36;
Pred. No.
    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Olivera BM,
                                DB
                                20;
    10;
                                Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                         disorders regulated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yoshikami
                                                                                                other subunits may be
   Indels
                                                                                                                                                                                                                                                                              treating
 0;
Gaps
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RESULT 7
AAW89493
ID AAW8
XX
AC AAW8
XX
DT 12-W
XX
CONC
KW CONC
KW Neur
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RAYOUT 10
AAYOU 20
XX AAYOU XX
AAYOU 20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes derivatives (I) of alpha-conotoxin MII (II), an alpha-4/7 conotoxin peptide, with practically the same activity as (II). (I), and its mimetics, are useful as cardiovascular agents; for treating or diagnosing small-cell lung carcinoma; and as gastric motility, urinary incontinence and anti-smoking agents. (I) and their mimetics can be designed to be selective for particular subtypes of neuronal nicotinic acetylcholine receptor, particularly the alpha 3 beta 2 and alpha 3 beta 4 subtypes. The present sequence represents a peptide from an example from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cartier GE,
Rivier JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (COGN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-NOV-1997;
24-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-MAY-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alpha conopeptide MII; alpha-4/7 conotoxin; cardiovascular agent;
neuronal nicotinic acetylcholine receptor; small cell lung carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alpha conotoxin peptide SEQ
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  neuronal
                        Conopeptide;
                                                                            Conopeptide AuIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 11; Page 51; 176pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Derivatives of alpha-conotoxin and their analogues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-326687/27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W09921878-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  detection; gastric motility; urinary incontinence; anti-smoking agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-JUL-1999
                                                                                                                                  12-MAR-1999
                                                                                                                                                                                                                                       AAW89493 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UTAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYCA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
les 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                    ω
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                                                                                                                                                                                                                                                                                                                                                                       CCSYPPCFATNSGYC
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SALK INST.
UNIV CASE WESTERN RESERVE.
UNIV UTAH RES FOUND.
ide; Conus
nicotinic
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Shen GS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97US-0065814.
97US-0062783.
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aulicus; AuIA; AuIB; AuIC; nAchR; neurotransmitter;
acetylcholine receptor; presynaptic release;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
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Shonk,
                                                                                                                                                                                                                                                                                                                                                                                                                        17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  65.5%;
33.3%;
                                                                                                                                                                                                                                                                                                                                                                       16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  McIntosh JM,
nk, Yoshikami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16
                                                                                                                                                                                                                                          16 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 36; DB:
Pred. No. 70;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ID NO:6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
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D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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RESULT 8
AAW89495
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Best Local
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                                                                                                                                                                                                                                                                                                                                                            Conopeptide; Conus aulicus; AuIA; AuIB; AuIC; nAchR; neurotransmitter; neuronal nicotinic acetylcholine receptor; presynaptic release; tobacco addiction; cardiovascular; gastric mobility disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conopeptide AuIC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW89495 standard; Protein; 16 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             addiction, cardiovascular and gastric mobility disorders, and urinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence represents a specifically claimed conopeptide. Conopeptides are used to target neuronal niceinic acetylcholine receptors (nachas) and selectively modulate the presynaptic release of specific neurotransmitters, for example in the treatment of tobacco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 10; Page 19; 22pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New conopeptides AuIA, AuIB, and AuIC - target neuronal nicotinic acetylcholine receptors and modulate neurotransmitter release \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;Idm
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conus aulicus
                        09-APR-1998;
                                                                            19-NOV-1998.
                                                                                                                                                                                                                                                                                        Conus aulicus
                                                                                                                                                                                                                                                                                                                                         urinary incontinence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       incontinence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UTAH ) UNIV UTAH RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-NOV-1998.
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                                                                                                                                                                                 Disulfide-bond
                                                                                                                             WO9851322-A1
                                                                                                                                                                                                            Disulfide-bond
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1999-059683/05.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Luo S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97us-0857068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WO-US07004
                           98WO-US07004
                                                                                                                                                                              Location/Qualifiers
2..8
3..16
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2..8
3..16
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33.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
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  peptide
used to
                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                        Alpha-conotoxin; neuronal nicotinic acetylcholine receptor; nAchR; small cell lung carcinoma; cardiovascular disorder; nicotine addiction; gastric motility disorder; urinary incontinence; mood disorder; bipolar disorder; unipolar depression; dysthymla;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence represents a specifically claimed conopeptide. Conopeptides are used to target neuronal nicotinic acetylcholine receptors (nAchrs) and selectively modulate the presynaptic release of specific neurotransmitters, for example in the treatment of tobacco addiction, cardiovascular and gastric mobility disorders, and urinary
        The present sequence represents an example of an alpha-conotoxin peptide from the general formula given in AAY24155, which can be
                                                   Disclosure; Page
                                                                                      Alpha-conotoxin peptides that are used to treat
                                                                                                                                            Cartier GE,
                                                                                                                                                                                             03-APR-1998;
31-DEC-1997;
                                                                                                                                                                                                                                                                                                                         Conus aulicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY24166 standard; peptide; 17 AA.
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                                                                                                                                                                    (UTAH ) UNIV UTAH RES FOUND
                                                                                                                                                                                                                                   23-DEC-1998;
                                                                                                                                                                                                                                                             08-JUL-1999.
                                                                                                                                                                                                                                                                                      WO9933482-A1
                                                                                                                                                                                                                                                                                                                                                    seasonal effective disorder
                                                                                                                                                                                                                                                                                                                                                                                                                           Alpha-conotoxin peptide SEQ ID NO:6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY24166;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 12; Page 19; 22pp; English.
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                                                                           neuronal nicotinic acetylcholine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 CCXXPXCXXXXXXXC
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                                                                                                                  1999-405367/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCSYPPCFATNSGYC 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1999-059683/05
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16 AA;
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                                                                                                                                          Luo
the general formula
disorders regulated
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      receptors and
                                                                                                                                                                                            98US-0080588
97US-0070153
                                                                                                                                                                                                                                  98WO-US27367
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                                                   6,
                                                                                                                                          Ś
                                                40pp;
                                                                                                                                          McIntosh JM,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AuIB, and AuIC
                                                 English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
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Pred.
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                                                                                                                                       Olivera BM,
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                                                                           receptors

    target neuronal nicotinic

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70;
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                                                                                    disorders regulated
                                                                                                                                       Yoshikami
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treat

regulated

neuronal nicotinic acetylcholine

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alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic acetylcholine receptors, including cardiovascular disorders, gastric
                                               The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snail. These peptides are found in minute quantities in the venom of the snails, and are targeted at the neuronal nicotinic acetylcholine receptors of the nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The
                                                                                                                                                                                                               alpha-conotoxin polypeptides derived from the venom of cone snails useful e.g. as neuromuscular blocking agents for use in surgery and
                                                                                                                                                                 Claim 39; Page 55;
                                                                                                                                                                                                                                                                                    WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cell lung carcinoma. The alpha-conotoxin antagonists are able to discriminate between non-symmetrical ligand binding interfaces present on the nAChR. The alpha-conotoxin has the ability to potently block any receptor containing a alpha beta subunit interface, regardless of what
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gastric motility disorder, urinary incontinence, nicotine addiction, a mood disorder or small cell lung carcinoma. Mood disorders include bipolar disorder, unipolar depression, dysthymia and seasonal effective disorder. The alpha-conotoxins can also be used for diagnosis of small
                                                                                                                                                                                                                                                                  N-PSDB; AAA89486.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    neuronal nicotinic acetylcholine receptor; cardiovascular gastric motility disorder; urinary incontinence; nicotine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder; neuronal nicotinic acetylcholine receptor; cardiovascular disorder;
                                                                                                                                                                                                                                                                                                                                                                                                29-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                              28-JAN-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conus betulinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cone snail alpha-conotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-JAN-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         receptors (nAChR). The alpha-conotoxins are useful for preparing a pharmaceutical composition for treating disorders regulated at neuronal nAChR, especially alpha 3 beta 2, alpha 3 beta 4 or alpha 7-containing nAChR. Disorders that can be treated include cardiovascular disorders,
                                                                                                                                                                                                                                                                                                                                                                (UTAH ) UNIV UTAH RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
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                                                                                                                                                                                                                                                                               2000-505965/45.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                subunits may be present in the receptor complex.
                                                                                                                                                                                                                                                                                                                                                 COGNETIX INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
5; Conser
                                                                                                                                                                                                 unipolar depression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17 AA;
                                                                                                                                                                                                                                                                                                               Olivera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
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                                                                                                                                                                229pp; English.
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                                                                                                                                                                                                                                                                                                               Hillyard DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ
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Pred.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.
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72;
                                                                                                                                                                                                                                                                                                               McIntosh JM,
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                                                                                                                                                                                                               in surgery and
                                                                                                                                                                                                                                                                                                               Jones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       addiction;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local :
            Query Match
Best Local
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 Matches
                                                                                                                                                      The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snail. These peptides are found in minute quantities in the venom of the snails, and are targeted at the neuronal nicotinic acetylcholine receptors of the nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          motility disorders, urinary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia seasonal affective disorder, and small cell lung carcinoma.
                                                                                        acetylcholine receptors, including cardiovascular disorders, gastric motility disorders, urinary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and
                                                                                                                                                                                                                                                                        Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder; neuronal nicotinic acetylcholine receptor; cardiovascular disorder; gastric motility disorder; urinary incontinence; nicotine addiction;
                                                                                                                                            alpha-conotoxins can be used as neuromuscular blocking agents in surgery
                                                                                                                                                                                                                                                  Claim 39;
                                                                                                                                                                                                                                                                                                                                N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                     Watkins M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-JAN-2000; 2000WO-US01979
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cone snail alpha-conotoxin SEQ ID NO: 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB21591;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB21591 standard; Peptide;
                                                   Sequence
                                                                                                                                                                                                                                                                                                                                              WPI;
                                                                                                                                                                                                                                                                                                                                                                                                          (UTAH ) UNIV UTAH RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-JAN-2001
                                                                             seasonal affective
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Local Similarity hes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24 CCSHPACSVTHPELC 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 CCXXPXCXXXXXXXC
                                                                                                                              for treating disorders regulated at the neuronal nicotinic
                                                                                                                                                                                                                                                                                                                               2000-505965/45
DB; AAA89487.
                                                                                                                                                                                                                                                                                                                                                                                             COGNETIX INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 5; Conserv
                                                                                                                                                                                                                                                Page 55; 229pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 39 AA;
                                                                                                                                                                                                                                                                                                                                                                     Olivera BM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 lung
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 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                   A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    carcinoma
                                                                             disorder, and small cell lung carcinoma
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             65.5%;
33.3%;
                                                                                                                                                                                                                                                                                                                                                                     Hillyard DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
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Pred. No.
 0;
            Score 36; I
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  Mismatches
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                                                                                                                                                                                                                                                                                                                                                                      McIntosh JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 21;
                        BG
            DB 21;
1.1e+02;
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                        Length 40
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  Indels
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 0,
                                                                                                                                                                                                                                                                                                     snails
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AAB21624
ID AAB2
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AAB21597
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                                              RESULT 13
                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 alpha-conotoxin polypeptides derived from the venom of cone snails useful e.g. as neuromuscular blocking agents for use in surgery and treating unipolar depression -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UTAH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  neuronal nicotinic acetylcholine receptor; cardiovascular gastric motility disorder; urinary incontinence; nicotine small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder; neuronal nicotinic acetylcholine receptor; cardiovascular disorder; qastric motility disorder; urinary incontinence; nicotine addiction;
                                                                                                                                                                                                                                                 motility disorders, urinary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and seasonal affective disorder, and small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                       nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The alpha-conotoxins can be used as neuromuscular blocking agents in surgery,
                                                                                                                                                                                                                                                                                                                                                         and are targeted at the neuronal nicotinic acetylcholine receptors of nervous system. They usually contain two disulphide bonds, which give
                                                                                                                                                                                                                                                                                                                                                                                    The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snail. These peptides are found in minute quantities in the venom of the snails.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Watkins M, Olivera BM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB21597 standard; Peptide;
                 AAB21624 standard; Peptide; 40 AA
                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                           and for treating disorders regulated at the neuronal nicotinic acetylcholine receptors, including cardiovascular disorders, gastric
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 39; Page 56; 229pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               treating unipolar depression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-505965/45
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-JAN-2001
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                                                                                                                         3 CCXXPXCXXXXXXX
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                                                                                            CCSHPACAGNNQHIC
                                                                                                                                                      Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UNIV UTAH RES COGNETIX INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAA89493
                                                                                                                                                                                                                    40 AA;
                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0118381
                                                                                                                                                                       65.5%;
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                                                                                                                         17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hillyard DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                                                       Pred. No.
                                                                                                                                                                                      Score
                                                                                                                                                         Mismatches
                                                                                                                                                                                      36;
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                                                                                                                                                                       1.1e+02;
                                                                                                                                                                                      DB 21;
                                                                                                                                                           10;
                                                                                                                                                                                      Length 40
                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in surgery and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jones
                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                      peptides
                                                                                                                                                         Gaps
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AAB21624;

for use in surgery and

for

Jones RM

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RESULT 14
AAB21427
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                        neuronal nicotinic acetylcholine receptor; cardiovascular gastric motility disorder; urinary incontinence; nicotine small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic acetylcholine receptors, including cardiovascular disorders, gastric motility disorders, uninary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and seasonal affective disorder, and small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snail. These peptides are found in minute quantities in the venom of the snails, and are targeted at the neuronal nicotinic acetylcholine receptors of the nervous system. They usually contain two disulphide bonds, which give them defined conformations, a rarity in molecules this small. The
                                                             Cone snail; alpha-conotoxin; venom; disulph neuronal nicotinic acetylcholine receptor;
                                                                                                                              Cone snail alpha-conotoxin SEQ ID NO: 61.
                                                                                                                                                                          19-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UTAH )
(COGN-)
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                                                                                                                                                                                                                    AAB21427;
                                                                                                                                                                                                                                                            AAB21427 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   alpha-conotoxin polypeptides derived from the venom of cone snails useful e.g. as neuromuscular blocking agents for use in surgery and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-JAN-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                            CCXXPXCXXXXXXXX 17
                                                                                                                                                                                                                                                                                                                                                                  CCSDPSCWRLHSLAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UNIV UTAH RES FOUND COGNETIX INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unipolar depression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                        (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ
                                                                                                                                                                                                                                                          56
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 36; DB 21;
Pred. No. 1.1e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                           disulphide bond; mood disorder;
ceptor; cardiovascular disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 376
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 40
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                                       addiction
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
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AAB21616
ID XXX ACC XXX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to a number of alpha-conotoxin peptides and their coding sequences from a number of different species of cone snail. These peptides are found in minute quantities in the venom of the snails, and are targeted at the neuronal nicotinic acetylcholine receptors of the nervous system. They usually contain two disulphide bonds, which give them defined and the contain two disulphide bonds, which give
                   29-JAN-1999;
                                                                                                                                                                                                                                                                Cone snail; alpha-conotoxin; venom; disulphide bond; mood disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acetylcholine receptors, including cardiovascular disorders, gastric motility disorders, urinary incontinence, nicotine addiction, mood disorders such as bipolar disorder, unipolar depression, dysthymia and seasonal affective disorder, and small cell lung carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                them defined conformations, a rarity in molecules this small. The alpha-conotoxins can be used as neuromuscular blocking agents in surgery, and for treating disorders regulated at the neuronal nicotinic
                                                                                                                                             WO200044776-A1
                                                                                                                                                                                       Conus obscurus
                                                                                                                                                                                                                             small cell lung
                                                                                                                                                                                                                                                                                                                                   Cone snail alpha-conotoxin SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                               19-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                         AAB21616;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB21616 standard;
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                                                       28-JAN-2000; 2000WO-US01979
                                                                                                                                                                                                                                                 gastric motility disorder; urinary incontinence; nicotine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          treating unipolar depression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB;
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Search completed: January 8, Job time: 31.9394 secs
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Best Local Similarity
Matches 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      alpha-conotoxin polypeptides derived from the venom of cone snails useful e.g. as neuromuscular blocking agents for use in surgery and for treating unipolar depression -  \frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2} \left( \frac{1}{2} \int_{-\infty
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N-PSDB; AAA89512.
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Pred. No. 1.3e+02;
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       Issued_Patents_AA: *
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Copyright (c) 1993 - 2003 Compugen Ltd.
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US-09-219-446B-8
US-09-219-446B-6
US-08-458-499-8
US-08-458-499-8
US-08-487-383-54
US-08-487-174-54
US-08-480-750-54
US-08-480-750-54
US-09-219-446B-1
US-09-219-446B-1
US-09-136-759A-1
US-09-136-759A-1
US-08-487-174-46
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42.215 Million cell updates/sec
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RESULT 2 US-08-857-068-2

Sequence 2, Application US/08857068 Patent No. 5866682 GENERAL INFORMATION:

APPLICANT:
APPLICANT: APPLICANT: APPLICANT:

McIntosh, J. Michael Cartier, G. Edward Yoshikami, Doju Luo, Siqin Olivera, Baldomero M.

OF INVENTION:

CONOPERTIBES AUIA, AUIB AND AUIC

Baldomero M

밁 Qy

2 CCSNPVCFATHSNLC 3 CCXXPXCXXXXXXXX 17

16

US-09-219-446B-4

TENGTH: 16
TYPE: PRT
ORGANISM: Artificial Sequence
ORGANISM: Martificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:FAT derivative
OTHER INFORMATION: of C. magus MII

Query Match Matches

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Conservative

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67.3**%**; 33.3**%**;

Score 37; Pred. No. Mismatches

DB 4; . 6:

Length 16; Indels

SOFTWARE: SEQ ID NO 4

RESULT 1 US-09-219-446 Sequence 4, Patent No. GENERAL INF APPLICANT: APPLICANT APPLICAN		23266666666666666666666666666666666666
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RESULT 3
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INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
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NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
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MEDIUM TYPE: Floppy disk
                                                                                                                                                          NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
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APPLICANT: Olivera, Baldomero M.
APPLICANT: CONOPEPTIDES
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NAME/KEY:
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APPLICANT: Cartier, G. Edward
APPLICANT: Yoshikami, Doju
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CTTY: Washington
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OPERATING SYSTEM: PC-DOS/MS-DOS
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COMPUTER: IBM PC OPERATING SYSTEM:
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                                                                              COUNTRY:
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1201 New York Avenue, Suite 1000
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1201 New York Avenue, Suite 1000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                        APPLICANT: University of Utah Research Foundation TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptic ETILE REFERENCE: Uses of Alpha-Conotoxins CURRENT APPLICATION NUMBER: US/09/219,446B CURRENT FILING DATE: 1998-12-23 PRIOR APPLICATION NUMBER: US 60/080,588 PRIOR EILING DATE: 1998-04-03
                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US PRIOR FILING DATE: 1997-12-31
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                                                                                                                                                  LENGTH: 16
TYPE: PRI
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TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
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LENGTH: 16 amino acids
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NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 530
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2 CCSYPPCFATNSDYC 16
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No. 6265541
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                                                                                                                                                                                                PatentIn Ver. 2.0
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                                                                                                                                                                                                                                                                                                                                                                                Cartier, G. Edward
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Yoshikami, Doju
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                                                            Conservative
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Pred. No.
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                                                          Score 36; DB 4; Length 16; Pred. No. 11; 0; Mismatches 10; Indels
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LENGTH: 17
TYPE: PRT
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                                          Matches
                                                                                   Query Match
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                                                                 Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Olivera, Baldomero M.
APPLICANT: McIntosh, J. Michael
APPLICANT: Yoshikami, Doju
APPLICANT: Cartier, G. Edward
APPLICANT: Luo, Siqin
APPLICANT: Luo, Siqin
APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/219,446B
CURRENT FILING DATE: 1998-12-23
DEFIDE APPLICATION NUMBER: US/09/219,446B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 60/080,588 PRIOR FILING DATE: 1998-04-03 PRIOR APPLICATION NUMBER: US 60/070,153 PRIOR FILING DATE: 1997-12-31
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                                                                                                                                           OTHER INFORMATION: Description of Artificial Sequence:Tyr derivative OTHER INFORMATION: of C. aulicus Aula
                                                                                                                                                                                         FEATURE:
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TYPE: PRT
ORGANISM: Conus aulicus
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nes 5; Conserv
3 CCXXPXCXXXXXXXX 17
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                                        5; Conservative
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Yoshikami, Doju
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33.3%;
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33.3%;
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Pred. No. 11;
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US-08-458-499-8
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ATTORNEY/AGENT INFORMATION:
NAME: Schumann, James J.
REGISTRATION NUMBER: 20856
REFERENCE/DOCKET NUMBER:
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APPLICANT:
APPLICANT:
           APPLICANT: Hopkins, Chris E.
APPLICANT: Dykert, John
APPLICANT: Torres, Josep L.
TITLE OF INVENTION: Conotoxins I
NUMBER OF SEQUENCES: 13
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LENGTH: 19 amino acids
TYPE: amino acid
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CITY: Chicago
CITY: Illinios
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
CORRESPONDENCE ADDRESS
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MEDIUM TYPE: Floppy disk
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TELEFAX: (619)552-0095
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STREET: 135 South LaSalle Street, Suite 900
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                                                                                                         Rivier, Jean E. I
Cruz, Lourdes J.
                                                                                           Abogadie, Fe
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Hopkins, Chris E.
Dykert, John
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40.0%;
                                                                                                                                           Baldomero M.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
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TELEPHONE: (619)552-1311
TELEFAX: (619)552-0095
TELEX: 20 6566 PATLAW CGO
INFORMATION FOR SEQ ID NO: 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/477,383
FILING DATE: 07-JUN-1995
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LENGTH: 19 amino acids
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/458,499
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Hillyard, David R. APPLICANT: Macintosh, J. Michael APPLICANT: Santos, Ameurfino S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 02-JUN-1
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                                              STREET: 1201 New CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Watch 65.5%; Local Similarity 40.0%; nes 6; Conservative
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CITY: Chicago
                                     CLASSIFICATION: 435
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Fitch, Even, Tabin & Flannery STREET: 135 South LaSalle Street, Suite 900
APPLICATION NUMBER:
                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 CCSHPACSGKYQXYC 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 CCXXPXCXXXXXXXX 17
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                                                                                                                                                                                                   20005
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                                                                                                                                                                                                                                                                    E: Venable, Baetjer, Howard & Civiletti
1201 New York Avenue, N.W., Suite 1000
                                                                                                                                                                                                                                                                                                                                                                                                              Cruz, Lourdes J
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                                                                                                                                                                                                                U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Olivera, Baldomero M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
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                                                                                                                                                                                                                                                                                                                                             Conotoxin Peptides
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US 08/137,800
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Pred. No. 12;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 54,
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Matches 5; Conserv
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APPLICANT: Olivera, Baldomero M.
APPLICANT: Cruz, Lourdes J.
APPLICANT: Hillyard, David R.
APPLICANT: Macintosh, J. Michael
APPLICANT: Santos, Ameurfino S.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linea MOLECULE TYPE: pe HYPOTHETICAL: NO ORIGINAL SOURCE:
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FILING DATE: 29-JUN-1993
ATTORNEY/AGENT INFORMATION:
                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/137,800
FILING DATE: 19-0CT-1993
                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Santos, Ameurfino S. TITLE OF INVENTION: Conotoxin F
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LENGTH: 16 amino acids
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                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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OTHER INFORMATION: /note= "The C-terminus is
OTHER INFORMATION: amidated."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 0 FILING DATE: 29-JUN-1993
                                                                                                                            FILING DATE: 07
CLASSIFICATION:
                                                                                                                                               APPLICATION NUMBER: US/08/487,174 FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                 COUNTRY: UZIP: 20005
                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Venable, Baetjer, Howard & Civiletti STREET: 1201 New York Avenue, N.W., Suite 1000
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                                     US 08/084,848
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 Mismatches

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Best Local Similarity
"hehes 5; Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 54, Patent No. 5
                                           PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/137,800
FILING DATE: 19-OCT-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/084,848
FILING DATE: 29-UUN-1993
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24260-10767
THEFEDIAME: 707-067-467-4617
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Olivera, Baldomero M. APPLICANT: Cruz, Lourdes J. APPLICANT: Hillyard, David R. APPLICANT: Macintosh, J. Michael APPLICANT: Santos, Ameurfino S. TITLE OF INVENTION: Conotoxin Pernumber Of Sequences: 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti
STREET: 1201 New York Avenue, N.W., Suite 1000
                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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REFERENCE/DOCKET NUMBER: 24
TELECOMMUNICATION INFORMATION:
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LOCATION:
                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/480,750 FILING DATE: 07-JUN-1995 CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Washington
STATE: DC
                              TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                COMPUTER:
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                  : 202-962-4810
202-962-8300
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SYSTEM: PC-DOS/MS-DOS
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                                                                   24260-107673
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Pred. No.
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Query Match
Best Local Similarity
"---hes 5; Conserv:
                                                                         GENERAL INFORMATION:
APPLICANT: Olivera,
APPLICANT: McIntosh
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; ORGANISM: Conus magus
US-09-219-446B-2
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                                                                                                                                                                       RESULT 13
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US-09-219-446B-2
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SEQ ID NO 2
LENGTH: 16
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                                                                                                                           Sequence 11, Application US/09219446B Patent No. 6265541
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Patent No. 6265541
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Matches 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: University of Utah Research Foundation TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides FILE REFERENCE: Uses of Alpha-Conotoxins CURRENT APPLICATION NUMBER: US/09/219,446B CURRENT FILING DATE: 1998-12-23 PRIOR APPLICATION NUMBER: US 60/080,588 PRIOR APPLICATION NUMBER: US 60/080,588 PRIOR FILING DATE: 1998-04-03 PRIOR FILING DATE: 1998-04-03 PRIOR FILING DATE: 1997-12-31
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                                APPLICANT:
                                                             APPLICANT:
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
                 APPLICANT:
                                                APPLICANT:
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NAME/KEY:
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LENGTH: 16 amino acids
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             University of Utah Research Foundation
                             Cartier, G. Edward
Luo, Siqin
                                                                          McIntosh, J. Michael
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Yoshikami, Doju
                                                             Yoshikami, Doju
                                                                                            Olivera, Baldomero M
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Pred. No.
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Pred. No. 15;
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; OTHER INFORMATION: Description of Artificial Sequence:N11S derivative ; OTHER INFORMATION: of C. purpurascens PnIA US-09-219-446B-11
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; OTHER INFORMATION: Description of Artificial Sequence: Tyr derivative
; OTHER INFORMATION: of C. magus MII
US-09-219-446B-3
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US-09-219-446B-3
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US-09-136-769A-3
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LENGTH: 16
Sequence 3, Application US/09136769A Patent NO. 6307014
GENERAL INFORMATION:
APPLICANT: Furie, Bruce
APPLICANT: Furie, Barbara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
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Best Local Similarity
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APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/219,446B
CURRENT FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR FILING DATE: 1998-04-03
PRIOR FILING DATE: 1998-04-03
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR FILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
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nes 5; Conserv
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Yoshikami, Doju
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LENGTH: 19
TYPE: PRT
ORGANISM: Conus textile
FEATURE:
RAME/KEY: VARIANT
LOCATION: (2)...(16)
OTHER INFORMATION: Pro at position 2 is 4Hyp and each xaa is
OTHER INFORMATION: Independently selected from Glu and
OTHER INFORMATION: one xaa is gamma-carboxyglutamic acid, provided that at least
OTHER INFORMATION: one xaa is gamma-carboxyglutamic acid.
NAME/KEY: VARIANT
LOCATION: (1)...(19)
OTHER INFORMATION: Xaa = Any Amino Acid
NAME/KEY: VARIANT
LOCATION: (1)...(19)
OTHER INFORMATION: Xaa = Any Amino Acid
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                                                           Query Match
Best Local Similarity
"hes 6; Conserva
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SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Stenflo, Johan
APPLICANT: Rigby, Alan C.
APPLICANT: Roepstoff, Peter
TITLE OF INVENTION: CONOPEPTIDES
FILE REFERENCE: 50065/002001
CURRENT FILING DATE: 1998-08-19
RUMBER OF SEQ ID NOS: 26
RUMBER OF SEQ ID NOS: 26
4 CCSDPRCNSSHPXLC 18
                                        3 CCXXPXCXXXXXXXX 17
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                                                                                 Conservative
                                                                                                  63.6%;
                                                                                                  Score 35; DB
Pred. No. 16;
                                                                                 Mismatches
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Search completed: January 8, 2003, 15:30:56 Job time: 11.8485 secs

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Result
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Maximum DB seq
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       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
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      length: 0
length: 2000000000
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/cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
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Listing first 45 summaries
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                                        Sequence 1, Appli
Sequence 16, Appl
Sequence 13, Appl
Sequence 39864, A
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Sequence
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Sequence 5,
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US-09-789-561-110	US-09-764-869-971	US-09-731-242A-4	US-09-864-761-45446	US-10-029-217A-24	US-09-808-602-82	US-09-060-854B-2)9-735-933-	US-10-153-064-89	US-09-817-774-24	US-10-095-139-12	US-10-146-130-8	US-10-138-516-6	US-09-764-877-1910	US-09-904-615-79	-09-739-254-	US-09-864-761-43103	US-09-897-465-7	US-10-052-586-525	US-09-908-670-3	US-10-066-500-130	US-09-978-189-612	US-09-999-832A-612	US-09-978-192A-612	US-09-978-697-612	US-09-978-295A-612
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ALIGNMENTS

RESULT 1 US-09-897-465-4

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RESULT 2
US-09-897-465-5
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APPLICANT: Olivera, Baldomero M.
APPLICANT: McIntosh, J. Michael
APPLICANT: Yoshikami, Doju
APPLICANT: Cartier, G. Edward
APPLICANT: Luo, Sigin
                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR ETILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PATENTIN VEY. 2.0
SEQ ID NO 4
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Best Local :
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CURRENT FILING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR FILING DATE: 1998-04-03
                                                                                                                                                                                                                                                                                                                    LENGTH: 16
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                   FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:FAT derivative
OTHER INFORMATION: of C. magus MII
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Yoshikami, Doju
Cartier, G. Edward
Luo, Siqin
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Pred. No.
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Sequence

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Sequence 215, App Sequence 19, Appl

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; LENGTH: 16
; TYPE: PRT
; ORGANISM: Conus aulicus
US-09-897-465-5
; Sequence 6, Application US/09897465
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US-09-897-465-6
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Best Local Similarity
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APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/897,465
CURRENT FILING DATE: 2001-07-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Olivera, Baldomero M. APPLICANT: McIntosh, J. Michael APPLICANT: Yoshikami, Doju APPLICANT: Cartier, G. Edward
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APPLICANT: McIntosh, J. Michae
APPLICANT: Yoshikami, Doju
                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR FILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
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Yoshikami, Doju
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Yoshikami, Doju
Cartier, G. Edward
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APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/897,465
CURRENT FILING DATE: 2001-07-03
CURRENT FILING DATE: 2001-07-03
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NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                       TYPE: PRT
ORGANISM: Conus magus
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Yoshikami, Doju
Cartier, G. Edward
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Pred. No.
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APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/897,465
CURRENT FILING DATE: 2001-07-03
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PRIOR FILING DATE: 1998-04-03
PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR FILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
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CURRENT FILING DATE: 2001-07-03
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TYPE: PRT
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                                                                                                                                                                                          TYPE: PRT
ORGANISM: Artificial Sequence
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Cartier, G. Edward
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Cartier, G. Edward
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; Patent No. US20020022715A1
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LENGTH: 10
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SEQ ID NO 12
LENGTH: 16
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Matches 5; Conserv
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APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09897,465
CURRENT FILING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR FILING DATE: 1998-04-03
PRIOR FILING DATE: 1998-04-03
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Yoshikami, Doju
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                                                                              Indels
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                                                                            Gaps
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APPLICANT: McIntosh, J. Michael
APPLICANT: Yoshikami, Doju
APPLICANT: Cartier, G. Edward
APPLICANT: Luo, Siqin
APPLICANT: University of Utah Research Foundation
APPLICANT: University of Utah Research Foundation
APPLICANTON: Uses of Alpha-Conotoxin Peptides
FIIE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/897,465
CURRENT FILING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR FILING DATE: 1998-04-03
PRIOR FILING DATE: 1998-04-03
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RESULT 12
US-09-897-465-1
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LENGTH: 16
TYPE: PRT
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Olivera, Baldomero M. APPLICANT: McIntosh, J. Michael APPLICANT: Yoshikami, Doju APPLICANT: Cartier, G. Edward
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                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR FILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: DURING, MATTHEW APPLICANT: XIAO, WEIDONG TITLE OF INVENTION: PRODUCTION OF CHIMERIC CAPSID VECTORS FILE REFERENCE: 102182-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn version 3.0
                                                                                                                                                                                                                                                                            OTHER INFORMATION: Description of Artificial Sequence:A10L derivative OTHER INFORMATION: of C. purpurascens PnIA
                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial Sequence FEATURE:
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TYPE: PRT
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                                                                                                                                                                        Local Similarity tes 5; Conserv
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Pred. No. 32;
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US-09-823-935-16
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                                                                                                              SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 16
LENGTH: 480
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APPLICANT: Olivera, Baldomero M.
APPLICANT: MCINTOSh, J. Michael
APPLICANT: Yoshikami, Doju
Query Match
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Best Local :
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                                                                                                                                                                                                                                                           APPLICANT: LINDBO, JOHN A.
APPLICANT: POGUE, Gregory P.
TITLE OF INVENTION: PRODUCTION OF PEPTIDES
TITLE OF INVENTION: N-TERMINAL VIRAL COAT
TITLE REFERENCE: 008010087CPUS05
CURRENT APPLICATION NUMBER: US/09/823,936
CURRENT FILING DATE: 2001-03-29
                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 09/ 520,967 PRIOR FILING DATE: 2000-03-08 NUMBER OF SEQ ID NOS: 55
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: GARGER, Stephen J. APPLICANT: GROSS, Cynthia APPLICANT: LINDBO, John A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: University of Utah Research Foundation TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides FILE REFERENCE: Uses of Alpha-Conotoxins CURRENT APPLICATION NUMBER: US/09/897, 465
CURRENT FILING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR APPLICATION NUMBER: US 60/080,588
PRIOR FILING DATE: 1998-04-03
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APPLICANT:
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PRIOR FILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
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                                                                      TYPE: PRT
ORGANISM: P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: PEPTIDE LOCATION: (8)..(12) COTHER INFORMATION: Xaa at residues 8, 10, 11 and 12 OTHER INFORMATION: acid; Xaa at residues 13, 14, 15 OTHER INFORMATION: des-Xaa or any amino acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION: (1)..(6)
OTHER INFORMATION: Xaa at residue 1 is des-Xaa, Tyr, mono-iodo-Tyr or OTHER INFORMATION: di-iodo-Tyr; Xaa at residue 2 is any amino acid; OTHER INFORMATION: Xaa at residue 5 is any amino acid; Xaa at residue OTHER INFORMATION: 6 is any amino acid.
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OTHER INFORMATION:
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60.0%;

 Mismatches

Score 33;
DB 10;
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Length 480
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PRIOR APPLICATION NUMBER: US 60/070,153
PRIOR FILING DATE: 1997-12-31
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PATENTIN VET. 2.0
SEQ ID NO 13
LENGTH: 12
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
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APPLICANT: University of Utah Research Foundation
TITLE OF INVENTION: Uses of Alpha-Conotoxin Peptides
FILE REFERENCE: Uses of Alpha-Conotoxins
CURRENT APPLICATION NUMBER: US/09/897,465
CURRENT FILLING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: US 60/080,588
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APPLICANT: WcIntosh, J. Michael
APPLICANT: Yoshikami, Doju
APPLICANT: Cartier, G. Edward
                                                                                 PRIOR PRIOR
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CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 2000-02-04
                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY FILE REFERENCE: Aeomica-X-1
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                                           PRIOR
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                 OR APPLICATION NUMBER: US 09/632,366
OR FILING DATE: 2000-08-03
OR APPLICATION NUMBER: GB 24263.6
OR FILING DATE: 2000-10-04
OR APPLICATION NUMBER: US 60/236,359
OR FILING DATE: 2000-09-27
OR APPLICATION NUMBER: PCT/US01/00666
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/US01/00667
OR FILING DATE: 2001-01-30
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APPLICATION NUMBER: PCT/US01/00664
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57.1%;
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Pred. No. 39;
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0: Mismatches 11;
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Search completed: January Job time: 7.72727 secs
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SEQ ID NO 39864
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                                                                                                                                                                                                                              Query Match
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OTHER INFORMATION: EXPRESSED IN BORF MARROW, SIGNAL = 3.7

OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 3.5

OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 3.5

OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 2.9

OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 3.5

OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 3.5

OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 3.1

OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 3.1

OTHER INFORMATION: EXPRESSED IN LIVER, SIGNAL = 4
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C;Superfamily: alpha-conotoxin
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F;1-16/Product: alpha-conotoxin AuIA #status experimental <MAT>
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c;Species: Conus aulicus (court cone)
C;Date: 23-Jul-1999 #sequence_revision 23-Jul-1999 #text_change 23-Jul-1999
C;Accession: A59045
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C;Species: Conus aulicus (court cone)
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RESULT 3
A59046
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A;Title: A new alpha-conotoxin which targets alpha3beta2 nicotinic acetylcholine receptors. A;Reference number: A59046; MUID:96205934; PMID:8631783
                                                                     RESULT 5
B54877
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A; Residues: 1-16 <FAI>
R; Hu, S.H.; Gehrmann, J.; Guddat, L.W.; Alewood, P.F.; Craik, D.J.; Martin,
submitted to the Brookhaven Protein Data Bank, January 1996
A; Reference number: A66355; PDB:1PEN
A; Contents: annotation; X-ray crystallography, 1.1 angstroms; residues 1-16
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C;Species: Conus pennaceus
C;Date: 19-Mar-1997 #sequence_revision 25-Apr-1997 #text_change 15-Sep-2000
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C; Species: Conus
C; Date: 19-Mar-19
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                                                                                                                                                                                                                                                                                                                                                                                                       C; Keywords: acetylcholine receptor inhibitor; amidated carboxyl end;
                                                                                                                                                                                                                                                                                                                                                                                                                             C;Comment: This alpha-conotoxin, as an acetylcholine receptor inhibitor, is a postsynapi C;Superfamily: alpha-conotoxin
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                                            alpha-conotoxin PnIB - cone shell (Conus pennaceus)
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    19-Mar-1997
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#sequence_revision 25-Apr-1997 #text_change
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R;Fainzilber, M.; Hasson, A.; Oren, R.; Burlingame, A.L.; Gordon, D.; Spira, M.E.; Z Blochemistry 33, 9523-9529, 1994
A;Title: New mollusc-specific alpha-conotoxins block Aplysia neuronal acetylcholine A;Reference number: A54877; MUID:94347719; PMID:8068627
A;Accession: B54877
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C;Keywords: acetylcholine receptor inhibitor; am
F;2-8,3-16/Disulfide bonds: #status experimental
                                                                                                                                                                                                                                                                  R;Loughnan, M.; Bond, T.; Atkins, A.; Cuevas, J.; Adams, D.J.; Broxton, N.M.; Livett, J. Biol. Chem. 273, 15667-15674, 1998
A;Title: Alpha-conotoxin EpI, a novel sulfated peptide from Conus episcopatus that se A;Reference number: A59042; MUID:98288307; PMID:9624161
A;Accession: A59042
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Biochemistry 34, 14519-14526, 1995
A;Title: alpha-Conotoxin EI, a new
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                                                                                                                                                                                                                                                                                                                                                                                                                      alpha-conotoxin EpI - cone shell (Conus episcopatus)
C;Species: Conus episcopatus (bishop's cone)
C;Date: 23-Jul-1999 #sequence_revision 23-Jul-1999 #text_change 13-Aug-1999
C;Accession: A59042
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Note: sequence confirmed by chemical synthesis C;Comment: This alpha-conotoxin, as an acetylcholine receptor inhibitor, C;Superfamily: alpha-conotoxin
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F;1-16/Product: alpha-conotoxin EpI #status experimental <MAT> F;2-8,3-16/Disulfide bonds: #status experimental F;15/Binding site: sulfate (Tyr) (covalent) #status experimental F;15/Modified site: amidated carboxyl end (Cys) #status experimental
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                                                                                                                       C; Keywords: acetylcholine receptor inhibitor; amidated carboxyl end; postsynaptic neu
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experimental

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C;Species: Candida glabrata
C;Date: 05-Mar-1993 #sequence_revision 05-Mar-1993 #text_change 29-Oct-1999
C;Accession: JC1197; B34484; A35236
        DNA Res. 5, 1-9, 1998
A;Title: Complete nucleotide sequences of 93-kb and 3.3-kb plasmids A;Reference number: Z14127; MUID:98290540; PMID:9628576
A;Accession: T00312
                                                                                                                   A;Cross-references: EMBL:AF074613; PIDN:AAC70083.1
A;Experimental source: strain EDL933; serotype O157:H7
R;Makino, K.; Ishii, K.; Yasunaga, T.; Hattori, M.; Yo
                                                                                                                                                                                                                                            Nucleic Acids Res. 26, 4196-4204, 1998
A;Title: The complete DNA sequence and analysis of the large virulence plasmid of Escher A; Reference number: Z22068; MUID:98391744; PMID:9722640
A;Accession: T42115
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GB:J05134; NID:g173323; PIDN:AAA35273.1; PID:g173324
A;Experimental source: MT-IIa
C;Comment: This protein is the primary contributor to copper sulfate res
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-52 <ME2>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Mehra, R.K.; Garey, J.R.; Butt, T.R.; Gray, W.R.; Winge, D.R. J. Blol. Chem. 264, 19747-19753, 1989
A;Tille: Candida glabrata metallothioneins. Cloning and sequence A;Reference number: A92737; MUID:90062075; PMID:2584191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:M86727; NID:g173327; PIDN:AAA35275.1; PID:g173328
A;Experimental source: MT-IIb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Title: Disruption analysis of metallothionein-encoding genes A; Reference number: JC1197; MUID:92267387; PMID:1339367 A; Accession: JC1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Mehra, R.K.; Thorvaldsen, J.L.; Macreadie, I.G.; Winge, D.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        metallothionein II - yeast (Candida glabrata)
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                                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 1-169 <B
                                                                                                                                                                                                                                                                                                                           R; Burland, V.; Shao,
                                                                                                                                                                                                                                                                                                                                            C; Accession: T42115; T00312
                                                                                                                                                                                                                                                                                                                                                                                                          transposase - Escherichia coli plasmid p0157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Gene: MT-IIb; MT-IIa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-52 <ME1>
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A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                     A;Status: preliminary; translated from GB/EMBL/DDBJ
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                                                                                                ; Shinagawa, H.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCXXPXC
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uct: metallothionein
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                                                                                                                                                                                                                                                                                                                             Y.; Perna, N.T.; Plunkett, G.; Sofia, H.J.; Blattner, F.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  metal binding
othionein II #status experimental <MAT>
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33.3%;
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57.1%;
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Pred. No.
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Pred. No. 1.1e+02;
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                                                                                                                     Yokoyama, K.; Yatsudo,
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                                                                                                                       H.C.;
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                                                                              A; Molecule type: DNA
A; Residues: 1-223 <WO2>
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                                                                                                                                                                                                                                                                                     ultra-high-sulfur keratin 2 - mouse
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
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    Chem.
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265,
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57.1%;
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57.1%;
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R; Wood, L.; Mills, M.; Hatzenbuhler, N.; Vogeli, G. J. Biol. Chem. 266, 4024, 1991
A;Title: Serine-rich ultra high sulfur protein gene expression A; Reference number: A38660; MUID:91154184; PMID:1840598
A; Accession: A38660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Title: Sequence and developmental expression of the mRNA encoding the seleno-protei A;Reference number: A37199; MUID:90152148; PMID:2303168 A;Accession: T10081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sperm mitochondrial capsule selenoprotein - mouse
C;Species: Mus musculus (house mouse)
C;Date: 16-Jul-1999 #sequence_revision 04-Mar-2000 #text_change 04-Mar-2000
C;Accession: T10081; A37199
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A;Experimental source: strain EHEC 0157:H7, substrain RIMD 0509952
A; Note: this is a correction R; Wood, L.; Mills, M.; Hatzenbuhler, N.; Vogeli,
                                                                                                                                                                                                                                                                                                           C;Species: Mus musculus (house mouse)
C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 24-Sep-1999
C;Accession: A38660; B38346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Keywords: mitochondrion; selenocysteine; sperm F;7,17,34/Modified site: selenocysteine #status
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A;Cross-references: GB:M29603; NID:g199088
A;Note: the authors translated the codon TGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Experimental source: strain CD-1
A; Note: in Genbank entry MUSMCS, release 113.0, PIDN:AAA53045.1, the selenocysteine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Molecule type: mRNA
A;Residues: 1-6,'x',8-16,'x',18-33,'x',35-197 <KLE1>
A;Cross-references: EMBL:M29603; NID:g199088; PIDN:AAA53045.1; PID:g567228
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                                                       A; Cross-references: GB:M37760; NID:g200963; PIDN:AAA40107.1;
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Pred. No.
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Pred. No. 1.9e+02;
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2e+02;
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                                                                                                                                                                                                                            murine hair and ski
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A;Title: Serine-rich ultra high sulfur protein gene expression in murine A;Reference number: A38346; MUID:91065960; PMID:2250030 A;Accession: B38346

hair

and skin

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RESULT
S23782
                                                                                                                                                                                                                                                                                              R;Nagesha, H.S.; Crabb, B.S.; Studdert, M.J. Arch. Virol. 128, 143-154, 1993
A;Title: Analysis of the nucleotide sequence of five genes A;Reference number: A48338; MUID:93119267; PMID:8380320
A;Accession: A48338
                                                                                                                                                                                                                                                                                                                                                                                           A4838
A4838
C:Species: equine herpesvirus 4 (strain 405/76)
C:Species: equine herpesvirus 4
C:Date: 17-Feb-1994 #sequence_revision 17-Feb-1994 #text_change 08-Oct-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ultra-high-sulfur keratin 1 - mouse
C:Species: Mus musculus (house mouse)
C:Date: 28-Jun-1991 #sequence_revision 28-Jun-1991 #text_change 24-Sep-1999
C:Accession: A38346
                                                                                                                                                                                                      A;Cross-references: GB:M89634; NID:g330929; PIDN:AAA46100.1; PID:g330930 A;Note: sequence extracted from NCBI backbone (NCBIN:121741, NCBIP:121742)
                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-363 < NAG>
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J. Biol. Chem. 265, 21375-21380, 1990
A;Title: Serine-rich ultra high sulfur protein gene expression
A;Reference number: A38346; MUID:91065960; PMID:2250030
A;Accession: A38346
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A; Residues: 1-230 <W
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A; Residues: 1-21, 'GGCGSGCGGCGSNCGGCGSSCCKPVCC', 22-40, 'GSS', 44-45, 'G', 47-48, 'S', 50, 'GSS'
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Search completed: January Job time: 15.9091 secs
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R;Murakami, Y.; Naitou, M.; Hagiwara, H.; Shibata, submitted to the EMBL Data Library, May 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                probable membrane protein YFR006w - yeast (Saccharomyces cerevisiae)
C:Species: Saccharomyces cerevisiae
C:Date: 02-Sep-1995 #sequence_revision 19-Oct-1995 #text_change 19-Apr-2002
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S56261
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A; Residues: 1-535 < MUR>
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A;Accession: S23782
A;Status: preliminary
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A; Residues: 1-426 <MEN>
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MT2_CANGA
MCS_MOUSE
CXA1_CONIM
FLGH_PSEPU
CID11_YEAST
CXA1_CONTM
FLGH_PSEPU
CXA1_CONST
KR2C_SHEEE
XYNA_NEOPA
CXA2_CONST
KR2C_SHEEE
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P56641;
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15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Alpha-conotoxin AuIC.
Conus aulicus (Court cone)
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CXA3_CONAL

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	vat	1PEN. neurotoxin receptor 2 8 3 16 16 16 16 16 1731	eurosci. 18:8571-8579(1998). FUNCTION: ALPHA-CONOTOXINS A BIND TO THE NICOTINIC ACETYL INHIBIT THEM. THIS PEPTIDE B ACETYLCHOLINE RECEPTORS COMP SUBCELLULAR LOCATION: Secret TISSUE SPECIFICITY: Expresse MASS SPECTROMETRY: MW=1725.6 SIMILARITY: BELONGS TO THE A	2, SYNTHESIS, AND MAS Venom; -99003392; PubMed-978 Kulak J.M., Cartier B.M., McIntosh J.M.; conotoxin AuIB select noline receptors and	no a r		339 489 692 729 817 849 849 222 571
17 16	65.5%; 33.3%; ive	n; Ne inhi	NOTOXINS NIC ACET PEPTIDE PTORS COL ON: Secre Express MW=1725	PubMed=9786965 , Cartier G.E. tosh J.M.; uIB selectivel ptors and nico	eat st st st cc	i	75999979
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		otoxin; Toxin; tor; Amidation. AMIDATION. 1E310FEB8FDC7001	(1998). (1998). ACETYLCHOLINE RECEPTORS (NACHR) PIDE BLOCKS MAMMALIAN NICOTINIC AS COMPOSED OF ALPHA-3/BETA-4 SU Secreted. Secreted. THE A-SUPERFAMILY OF CONOTOXIN	ů. –	6 A pda pda;	ENTS	2002383
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J. Neurosci. 18:8571-8579(1998).
i- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES, THEY
BIND TO THE NICOTINIC ACETYLCHOLINE RECEPTORS (NACHR) AND THUS
INHIBIT THEM. THIS PEPTIDE BLOCKS MAMMALIAN NICOTINIC
ACETYLCHOLINE RECEPTORS COMPOSED OF ALPHA-3/BETA-4 SUBUNITS.
                                                                                                                                                                                                                                                                                                                                                                                15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DUN-2002 (Rel. 41, Last annotation update)
Alpha-conotoxin MII (M2).
Conus magus (Magus cone).
Conus magus (Magus cone).
Eukaryota, Metazoa; Mollusca; Gastropoda; Caenogastropoda;
Neogastropoda; Conoidea; Conidae; Conus.
                             STRUCTURE BY NMR. MEDLINE=99060038; Hill J.M., Oomen (
                                                                                                                          MEDLINE=98052282; PubMed=9398298;
Shon K.-J., Koerber S.C., Rivler J.E., Olivera B.M., McIntosh J.M.;
"Three-dimensional solution structure of alpha-conotoxin MII, an
alpha3beta2 neuronal nicotinic acetylcholine receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <del>-</del> <del>-</del> <del>-</del> <del>-</del> -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-99003392; PubMed=9786965; Luo S., Kulak J.M., Cartier G.E., Jacobsen R.B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Olivera B.M., McIntosh J.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Neogastropoda; Conoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota;
              Craik D.J.
                                                                                                                                                                                        STRUCTURE BY NMR.
                                                                                                                                                                                                                         acetylcholine receptors.";
J. Biol. Chem. 271:7522-7528(1996).
                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=6492;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P56636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CXA2_CONMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Acetylcholine receptor inhibitor; DISULFID 2 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Alpha-conotoxin AuIB selectively blocks alpha3 beta4 nicotinic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=89437;
"Three-dimensional solution structure of alpha-conotoxin MII by NMR
                                                                                            Biochemistry
                                                                                                                                                                                                                                                       "A new alpha-conotoxin which targets
                                                                                                                                                                                                                                                                      McIntosh J.M.;
                                                                                                                                                                                                                                                                                      Cartier G.E., Yoshikami D.,
                                                                                                                                                                                                                                                                                                       MEDLINE=96205934; PubMed=8631783;
                                                                                                                                                                                                                                                                                                                                       SEQUENCE, AND SYNTHESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Postsynaptic neurotoxin; Neurotoxin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
hes 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 CCXXPXCXXXXXXXC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUBCELLULAR LOCATION: Secreted.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Expressed by the venom duct.
TISSUE SPECIFICITY: MW=1667.6; MCTHOD=Electrospray.
MASS SPECTROMETRY: MW=1667.6; MCTHOD=Electrospray.
SIMILARITY: BELONGS TO THE A-SUPERFAMILY OF CONOTOXINS. ALPHA-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCSYPPCFATNSGYC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P50984; 1PEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SYNTHESIS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Metazoa; Mollusca; Gastropoda; Caenogastropoda;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                           36:15693-15700(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                             C.J., Miranda L.P.,
                                              PubMed=9843366;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1673 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65.5%;
33.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AND MASS SPECTROMETRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conidae; Conus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                      Gray W.R., Luo S., Olivera B.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 4.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1E310D3B8FDC7001 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AMIDATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Amidation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Toxin;
                                                                                                                                                                                                                                                       alpha3beta2 nicotinic
                             Bingham J.-P., Alewood P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA.
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the European Bioinformatics Institute.

There are no

restrictions

on

DISULFID

PEPTIDE PROPEP

1 22 49 51

21 48 57

POTENTIAL.

POTENTIAL.

Signal;

Amidation.

ALPHA-TYPE CONOTOXIN TX1 BY SIMILARITY.

SIGNAL

Acetylcholine Postsynaptic

EMBL; AF146352; AAD31912.1;

neurotoxin;

Neurotoxin;

receptor inhibitor;

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CXA1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-0CT-2001
16-0CT-2001
                                                                                                                                                                                                                                                                                                                                                                                                            Conus textile (Cloth-of-gold cone).
Eukaryota; Metazoa; Mollusca; Gastropoda
Neogastropoda; Conoidea; Conidae; Conus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     spectroscopy: effects of solution environment on helicity."; Biochemistry 37:15621-15630(1998).
-!- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES.
                                                                                                                                                                                                                                                                                                           cloning
                                                                                                                                                                                                                                                                                                                                TISSUE=Venom duct;
MEDLINE=20037955; PubMed=10573284;
Lu B.-S., Yu F., Zhao D., Huang P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                16-CCT-2001 (Rel. 40, Created)
16-CCT-2001 (Rel. 40, Last sequence update)
15-CUT-2002 (Rel. 41, Last annotation updat
Alpha-type conotoxin Txl precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9XZK6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Postsynaptic neurotoxin; Neurotoxin; Toxin; Acetylcholine receptor inhibitor; Amidation;
                                                                                                                                                                                                                                                                                            Peptides 20:1139-1144(1999)
                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=6494;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  +
                                                                                                                                                                                                                                                                                                                       "Conopeptides from Conus striatus and Conus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
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                                                                                                                                                                                                                             SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Expressed b
                                                                                                                                                                                                                                                       FUNCTION: Alpha-conotoxins act on pobind to the nicotinic acetylcholine inhibit them (By similarity).
                                                                                                                                                                                                                 TISSUE SPECIFICITY: Expressed by the venom SIMILARITY: BELONGS TO THE A-SUPERFAMILY OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE SPECIFICITY: Expressed by the venom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                       FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1M2C;
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1M2C; 13-JAN-99.
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5; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1716 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TO THE A-SUPERFAMILY OF CONOTOXINS. ALPHA-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 6.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     282AEF190166CAF9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AMIDATION
                                                                                                                                                                                                                                                                                                                                                                                                                          Gastropoda;
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                                                                                                                                                                                                                                                                                                                                 P.-T., Huang
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                                                                                                                                                                                                                                                                                 postsynaptic
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                                                                                                                                                                                                                                                                     receptors
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                                                                                                                                                                                                                                                                                                                                                                                                                          Caenogastropoda;
                                                                                                                                                                                                                                                                                                                        textile
                                                                                                                                                                                                                     OF
                                                                                                                                                                                                                                                                                                                                   C.-F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                duct
                                                                                                                                                                                                                                duct
                                                                                                                                                                                                                    CONOTOXINS. ALPHA-TYPE
                                                                                                                                                                                                                                                                    (nAChR)
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RESULT 6
CXAA_CONPE
ID CXAA_C
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                                                                                                                                                                           Query Match
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P50984;
01-OCT-1996
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          075690;
                                       CXAA_CONPE
                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                 Keratin;
                                                                                                                                                                                                                            EMBL; AJ006692; CAA07188.1; -. HSSP; P01055; 1BBI.
                                                                                                                                                                                                                                                                                       the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                          +
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  keratin genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perez C., Auriol J., Gerst C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KerB)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Keratin, ultra high-sulfur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KRUB_HUMAN
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                                                                                                                                                                                                                                                                                                                                                                   -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=99148005; PubMed=10023043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'Genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G
                                                                                                   46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51 CCSDPRCNSSHPELC
                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                           3 CCXXPXCXXXXXXXC
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                                                                                                                                                                                                                                                                                                                                                                                                               S 227:137-148(1999).

B 227:137-148(1999).

FUNCTION: THE KERATIN PRODUCTS OF MAMMALIAN EPIDERMAL DERIVATIVES FUNCTION: THE KERATIVES OF MICROFIBRILS EMBEDDED IN A RIGID MATRIX OF OTHER PROTEINS. THE MATRIX PROTEINS INCLUDE THE HIGH-SULFUR AND HIGH-TYROSINE KERATINS, HAVING MOLECULAR WEIGHTS OF 6-20 kDa, WHEREAS THE MICROFIBRILS CONTAIN THE LARGER, LOW-SULFUR KERATINS (40-56 kDa).
                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: BELONGS TO THE UHS KERATIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                      HAIR FOLLICLES.

DOMAIN: MAINLY COMPOSED OF CYS-RICH (CR),
                                                                                                                                                                                                                                                                                                                                                                                RICH (SR)
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                                                                                                    CCCVPACSCSSCGSC
                                                                                                                                                                                                                                                              s requires a license agreement (See http://www.isb-sib.ch/announce/
an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 5; Conserv
                                                                                                                                                  Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , Auriol J., Gerst C., Bernard B.A., Egly J.-M organization and promoter characterization of
                                                                                                                                                                                                 Repeat; Multigene family.
194 AA; 18094 MW; 8607B2AE906FE44A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69
 (Rel.
                                                                                                                                                 Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52
66
                                                                                                                                                                                                                                                                                                                                                                             REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
 34,
34,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7442 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  66
                                                                                                                                                             63.6%;
33.3%;
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                                                                                                  60
Last
             Created)
sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      matrix protein B (UHS keratin
                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                              Score 35; DB Pred. No. 25;
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AMIDATION (G-67 PROVIDE AMIDE GROUP).
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                                      PRT;
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Best Local
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Postsynaptic neuronal in Acetylcholine receptor in Acetylcholine 3 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                         antagonist, alpha-conotoxin PnIA from Conus pennaceus.";
Structure 4:417-423(1996).

-I- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES, THEY
BIND TO THE NICOTINIC ACETYLCHOLINE RECEPTORS (NACHR) AND THUS
INHIBIT THEM. IN CONTRAST TO OTHER ALPHA-CONOTOXINS, WHICH ARE
SELECTIVE FOR VERTEBRATE SKELETAL MUSCLE NACHR, THE CONUS
PENNACEUS ALPHA-CONOTOXINS BLOCK NACHR IN MOLLUSKS.
-I- SUBCELLULAR LOCATION: Secreted.
-I- TISSUE SPECIFICITY: Expressed by the venom duct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-99242956; PubMed-10226369; Wolfender J.L., Chu F., Ball H., Wolfender F., Fainzilber M., Baldwin M.A., Burlingame A.L.; Baldwin M.A., Burlingame A.L.; "Identification of tyrosine sulfation in Conus pennaceus conotoxins alpha-PnIA and alpha-PnIB: further investigation of labile sulfo- ar phosphopeptides by electrospray, matrix-assisted laser desorption/ionization (MALDI) and atmospheric pressure MALDI mass
Conus pennaceus (Feathered cone).
Eukaryota; Metazoa; Mollusca; Gast
Neogastropoda; Conoidea; Conidae;
NCBI_TaxID-37335;
                                                                      P50985;
01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last seq
15-JUN-2002 (Rel. 41, Last ann
                                                                                                                                                                                                                                                                                                                                 MOD_RES
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Neogastropoda; Conoidea; Conidae;
                                                       Alpha-conotoxin PnIB
                                                                                                                                CXAB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hu S.-H., Gehrmann J., Guddat L.W., Alewood P.F., Craik D.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  X-RAY CRYSTALLOGRAPHY (1.1 ANGSTROMS). MEDLINE=96311277; PubMed=8740364;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           spectrometry."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biochemistry 33:9523-9529(1994).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Venom;
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                                                                                                                               STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                       inhibitor;
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                                                                      sequence u
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Pred. No.
                                                                                                                                                                                                                                                                                                                  05310FF95EC99005 CRC64;
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AMIDATION.
                          Gastropoda; Caenogastropoda;
                                                                                                                               PRT;
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                Conus
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RESULT 8
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OC Neogas
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RP SEQUEN
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Best Local :
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SEQUENCE.
TISSUE-Venom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Identification of tyrosine sulfation in Conus pennace alpha-PnIA and alpha-PnIB: further investigation of lal phosphoeptides by electrospray, matrix-assisted laser desorption/ionization (MALDI) and atmospheric pressure spectrometry.";
                                                                                                                                                                                                                                                                                                                                                                                                                MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hu S.H., Gehrmann J., Alewood P.F., Craik D.J., Martin J.L.; Crystal structure at 1.1-A resolution of alpha-conotoxin PnII comparison with alpha-conotoxins PnIA and GI."; Biochemistry 36:11323-11330(1997).

-1- FUNCTION: ALPHA-CONOTOXINS ACT ON POSTSYNAPTIC MEMBRANES,
              MEDLINE=96062516; PubMed=7578057;
Martinez J.S., Olivera B.M., Gray W.R.,
Abramson S.N., McIntosh J.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PDB;
                                                          TISSUE=Venom;
                                                                     SEQUENCE
                                                                                                NCBI_TaxID=55423;
                                                                                                              Neogastropoda;
                                                                                                                          Conus ermineus (Atlantic fish-hunting cone).
Eukaryota; Metazoa; Mollusca; Gastropoda; Caenogastropoda;
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Hu S.H., Gehrmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X-RAY CRYSTALLOGRAPHY (1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wolfender J.L., Chu F., Ball H., Baldwin M.A., Burlingame A.L.;
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TISSUE SPECIFICITY: Expressed by the venom duct.
SIMILARITY: BELONGS TO THE A-SUPERFAMILY OF CONC
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16 16
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    McIntosh J.M.;
in EI, a new ni
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                                                                                                                                                                                                                                                                                                                                                                                                   1643 MW;
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33.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      inhibitor; Amidation;
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    nicotinic
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Pred. No. 8.4;
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                                                                                                                                                                   update)
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                             Craig A.G.,
                                                                                                                                                                                                                         AA
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                               Groebe D.R.,
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RESULT 10
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                                                                                                                             DISULFID MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Two new classes of conopeptides inhibit the alphal-adrenoceptor noradrenaline transporter.";
Nat. Neurosci. 4:902-907(2001).
-!- FUNCTION: Inhibits alpha-1 adrenergic receptors.
-!- SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: Expressed by the venom duct.
-!- MASS SPECTROMETRY: MM-2390.15; METHOD-Electrospray.
                                                                                                                                                                                                                                                                                                                                                              15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Rho-conotoxin TIA (Rho-TIA)
                                                                                                                                                                                                                                                                  Sharpe I.A., Gehrmann Atkins A., Palant E.,
                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Mollusca; Gastropoda; Caenogastropoda; Neogastropoda; Conoidea; Conidae; Conus.
                                                                                                                     SEQUENCE
                                                                                                                                                 DISULFID
                                                                                                                                                            Toxin;
                                                                                                                                                                    PDB;
                                                                                                                                                                             -1- MASS SPECTROMETRY: MW-2390.15; METHOD-Electrospray
-1- SIMILARITY: BELONGS TO THE RHO-CONOTOXIN FAMILY.
                                                                                                                                                                                                                                                                                     MEDLINE=21419681; PubMed=11528421;
                                                                                                                                                                                                                                                                                               TISSUE-Venom
                                                                                                                                                                                                                                                                                                         SEQUENCE,
                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=6495;
                                                                                                                                                                                                                                                                                                                                                       Conus tulipa (Fish-hunting cone snail) (Tulip cone)
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5; Conserv
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                                                                                                                     19 AA;
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                                                                              Conservative
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                                                                                                                               19
5
                                                                                                                                                                                                                                                                Gehrmann J., Loughnan M.L.,
alant E., Craik D.J., Adams I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183
188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            receptor inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                              3D-structure.
11
19
19
AMI
                                                                                                                     2396 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2082 MW;
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18
3
                                                                                        61.8%;
33.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61.8%;
                                                          17
                                       19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Expressed by the venom duct. TO THE A-SUPERFAMILY OF CONOTOXINS.
                                                                                                                                                                                                                                                                                                         STRUCTURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Neurotoxin;
                                                                              0,
                                                                                      Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 34;
Pred. No.
                                                                                                                     C5917DDE62CA89DC CRC64;
                                                                                                                             AMIDATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60A61A6C427A6B5E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AMIDATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HYDROXYLATION
                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Amidation;
                                                                                                                                                                                                                                                                                                         ВY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Toxin;
                                                                                                                                                                                                                                                                                                                                                                                                                 19
                                                                                                  DB 1;
                                                                                                                                                                                                                                                                 D.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                 AA
                                                                                                                                                                                                                                                                          Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hydroxylation
                                                                              10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10;
                                                                                                                                                                                                                                                                   Alewood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 18;
                                                                                                Length 19;
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                                                                                                                                                                                                                                                                          Adams
                                                                                                                                                                                                                                                                   P.F.
                                                                                                                                                                                                                                                                           D.A.,
                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALPHA-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                             Gaps
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CXA2_CONTE

STANDARD;

PRT;

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RESULT
CXA1_C
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                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                       Matches
         MEDLINE=98376423; PubMed=9708977;
Hu S.H., Loughnan M., Miller R., Weeks C.M., Blessing R.H.,
Alewood P.F., Lewis R.J., Martin J.L.;
"The 1.1-A resolution crystal structure of [Tyr15]EpI, a novel
alpha-conotoxin from Conus episcopatus, solved by direct methods.";
Blochemistry 37:11425-11433(1998).
                                                                                                                                 Conus episcopatus (Bishop's cone).
Eukaryota; Metazoa; Mollusca; Gast
Neogastropoda; Conoidea; Conidae;
                                                                                                                                                                                    P56638;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequ
15-JUN-2002 (Rel. 41, Last anno
                                                                                                                                                                                                                                                            CONEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                          X-RAY CRYSTALLOGRAPHY (1.1 ANGSTROMS).
                                                                                                                                                                          Alpha-conotoxin EpI.
                                                                                                                                                                                                                                              CXA1_CONEP
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AF146353; AAD31913.1; -. Postsynaptic neurotoxin; Neurotoxin; Acetylcholine receptor inhibitor; Si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptides 20:1139-1144(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=20037955; PubMed=10573284;
Lu B-S., Yu F., Zhao D., Huang P.-T., Huang
"Conopeptides from Conus striatus and Conus t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Venom duct;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conus textile (Cloth-of-gold cone).
Eukaryota; Metazoa; Mollusca; Gastr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Alpha-type conotoxin Tx2 precursor.
                                                                                                                        NCBI_TaxID=88764;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PEPTIDE
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                                                                                                                                                                                                                                                                                                                 51
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION: Alpha-conotoxins act on pobind to the nicotinic acetylcholine inhibit them (By similarity).
SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: BELONGS TO THE A-SUPERFAMILY OF CONOTOXINS. ALPHA-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE SPECIFICITY:
                                                                                                                                                                                                                                                                                                                                         CCXXPXCXXXXXXXC
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5; Conser
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                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     le receptor
1 21
21
48
22 48
49 66
51 57
51 65
ALPHA-CONOTOXINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        izoa; Mollusca; Gastropoda;
Conoidea; Conidae; Conus.
                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                        7254 MW;
                                                                                                                                                                                                                                                                                                                                                                               61.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Expressed by the venom
                                                                                                                                                                                        annotation
                                                                                                                                                                                                     sequence update
                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                 Score 34; DB Pred. No. 19; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                       EDDB59BBAB94F26F CRC64;
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Вү
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALPHA-TYPE CONOTOXIN TX2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
                                                                                                                                             Gastropoda;
                                                                                                                                                                                                                                             PRT;
 ACT ON
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                                                                                                                                    Conus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Signal.
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POSTSYNAPTIC
                                                                                                                                                                                        update)
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                                                                                                                                             Caenogastropoda;
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                                                                                                                                                                                                                                                                                                                                                                                            1; Length 66
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MT2_CANGA
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Best Local :
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          SEQUENCE OF 1-19 AND 34-51.

SEQUENCE OF 1-19 AND 34-51.

MEDIANE-89057829; PubMed-3194392;

Mehra R.K., Tarbet B.E., Gray W.R., Winge D.R.;

Mehra R.K., Winge D.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MT2_CANGA
P15114;
01-APR-1990
                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-90202916; PubMed-2318858; Mehra R.K., Garey J.R., Winge D.R.; Mehra R.K. darey J.R. darey J.R. darey J.R. darey J. darey J. Biol. Chem. 265:6369-6375(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A., AND SEQUENCE OF 19-38.
MEDLINB=90062075; PubMed=2584191;
Mehra R.K., Garey J.R., Butt T.R., Gray W.R.
"Candida glabrata metallothioneins. Cloning and characterization of proteins.";
J. Biol. Chem. 264:19747-19753(1989).
                                                                                                                                                                                                                                                                                   MEDIINE-92267387; PubMed-1339367;
Mehra R.K., Thorvaldsen J.L., Macreadie I.G., Wir
"Disruption analysis of metallothionein-encoding
                                                                                                                                                                                                                                                  Ğene 114:75-80(1992).
                                                                                                                                                                                                                                                                        glabrata
                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Saccharomycetales; mitosporic Saccharomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Candida glabrata (Yeast) (Torulopsis glabrata).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MT-II AND MT-IIB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Metallothionein-II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-APR-1990
15-JUN-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=5478;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Acetylcholine receptor inhibitor; Amidation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Postsynaptic neurotoxin;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3/BETA-4 SUBUNITS.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Expressed by
SILVER BUT NOT BY
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5; Conserv
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(Rel. 14, Last sequence up
(Rel. 41, Last annotation
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CADMIUM
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AMIDATION.
C63385F376C99B4C CRC64;
SALTS
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                                                                                                                                                                                                                                                                                                                                                                                                               a member of glabrata.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence
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RESULT 13
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                                                                                                                                                                               Kleene K.C., Smith J., Bozorgzadeh A., Harris M., Hahn L., Karimpour I., Gerstel J.;
"Sequence and developmental expression of the mRNA encoding the seleno-protein of the sperm mitochondrial capsule in the mouse.";
Dev. Biol. 137:395-402(1990).

-i- FUNCTION: STRUCTURAL PROTEIN OF THE SPERM MITOCHONDRIAL CAPSULE.

STRUCTURE OF THE SPERM MITOCHONDRIA.

STRUCTURE OF THE SPERM MITOCHONDRIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MCS_MOUSE
P15265;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse).
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-APR-1990 (Rel. 14, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Sperm mitochondrial capsule selenoprotein (MC
                                                     This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 selenocysteine codons.";
DNA Cell Biol. 11:693-699(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                           between
                                                                                                          -!- DEVELOPMENTAL STAGE: LATE MEIOTIC AND EARLY HAPLOID CELLS
                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=90152148; PubMed=2303168;
                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 55-197 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Karimpour I., Cutler M., Shih D., Smith J., Kleene K.C.;
"Sequence of the gene encoding the mitochondrial capsule
selenoprotein of mouse sperm: identification of three in phase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-93039675; PubMed=1418626; Karimpour I., Cutler M., Shih D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
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3L; J05398; AAA35274.1; -.
3L; M86727; AAA35275.1; -.
3; B31152; B31252;
3; JC1197; JC1197.
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                                                                                                                                      SUBCELLULAR LOCATION: KERATINOUS MITOCHONDRIAL TISSUE SPECIFICITY: TESTIS.
  SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
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51
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57.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 23;
0; Mismatches
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ABD19E511175EF12 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cluster; Copper; Repeat.
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Best Local Similarity

60.0%; 57.1%;

Pred. Score

No. 33; DB 86;

Length 535

SEQUENCE

535 AA;

61753 MW;

POTENTIAL.

4D251041CE9627FC CRC64;

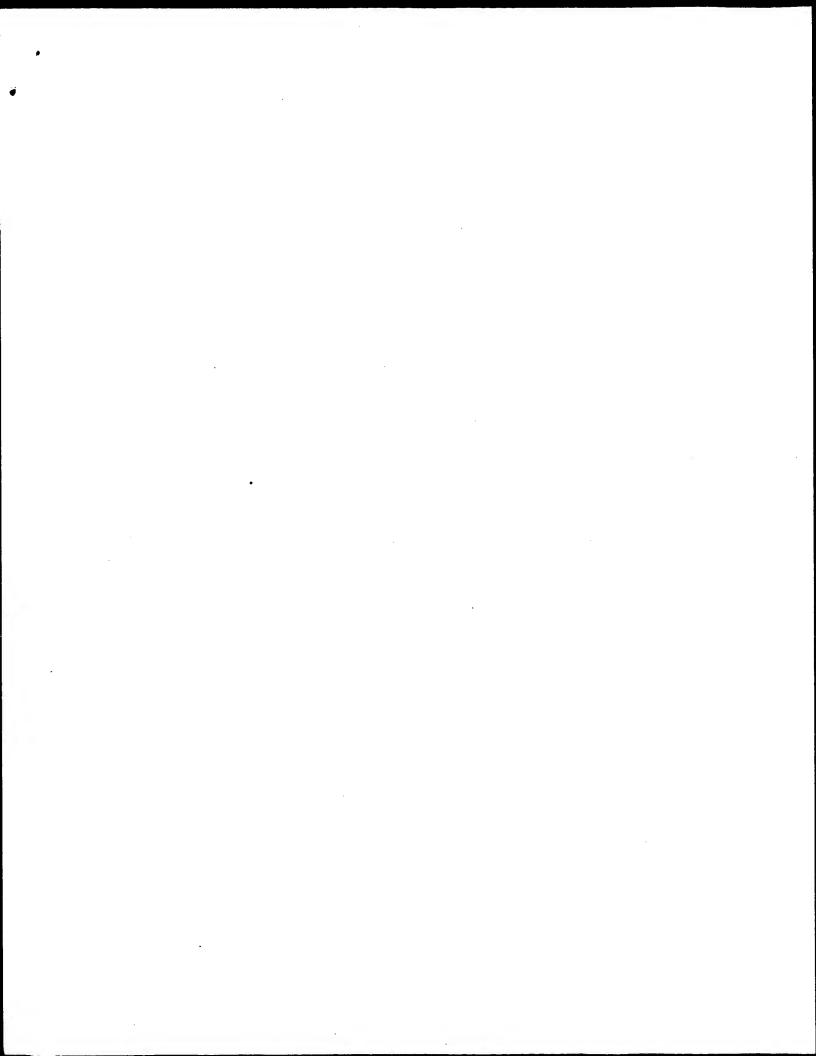
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01-NOV-1995 (Rel. 3
16-OCT-2001 (Rel. 4
Hypothetical 61.8)
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                                                                                                                                                                                                                                                                                             the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Murakami Y., Naitou M., Hagiwara H., Shibata T., Ozawa M., Sasanuma S.-I., Sasanuma M., Tsuchiya Y., Soeda E., Yokoyar Yamazaki M., Tashiro H., Eki T.; "Analysis of the nucleotide sequence of chromosome VI from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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                                                                                           InterPro; IPR000994; Peptidase_M24.
InterPro; IPR001131; Xaa-Pro_peptds.
Pfam; PF00557; Peptidase_M24; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P43590;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nat. Genet. 10:261-268(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Saccharomyces cerevisiae.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=S288c / AB972;
MEDLINE=95400292; PubMed=7670463;
                                               Hypothetical protein; Hydrolase;
                                                                           PROSITE;
                                                                                                                                                                                                    MEROPS; M24.UPB; -
                                                                                                                                                                                                                                                     EMBL; D50617; BAA09245.1;
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32,
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kDa
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                                                                      PROLINE_PEPTIDASE; 1.
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57.1%;
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peptidase in MPR1-GCN20
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                                                    Transmembrane
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STRUCTURE BY NMR. MEDLINE-99324017;
                                                                                                                                                                                                                                                                                             scaffold in snail and snake toxins
acetylcholine receptors.";
                                                                                                                                                                                                                                                                                                               Maslennikov I.V., Shenkarev Z.O., Zhmak M.N., Ivanov V.T., Methfessel C., Tsetlin V.I., Arseniev A.S.; "NMR spatial structure of alpha-conotoxin ImI reveals a common scaffold in snall and snake toxins recognizing neuronal nicotinic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "NMR solution structure of alpha-conotoxin ImI and comparison to other conotoxins specific for neuronal nicotinic acetylcholine receptors.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRUCTURE BY NMR.
MEDLINE=99212205; PubMed=10194298;
ROGETS J.P., Luginbuehl P., Shen G
Wemmer D.E.;
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MEDLINE-95379776; PubMed=7651351;
Johnson D.S., Martinez J., Elgoyh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT 1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                    PubMed=10431825;
Lamthanh H., Jegou-Matheron C.,
                                                                                                                                                                                                                       STRUCTURE BY NMR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Solution structure of alpha-conotoxin ImI determined two-dimensional NMR spectroscopy."; Biochim. Biophys. Acta 1431:384-394(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acetylcholine receptor blockade:
alpha 7 and alpha 9 receptors.";
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Neogastropoda; Cono:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conus imperialis (Imperial cone).
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                                                                                               NMR and binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=10350614;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRUCTURE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              McIntosh
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                                                                  nicotinic acetylcholine receptor recognition: binding studies."; t. 454:293-298(1999).
                                                                                                                                             H., Jegou-Matheron C., Servent D., Menez A., Lancelin conformation of the alpha-conotoxin ImI for the alpha-
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Conoidea; Conidae;
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                                                                                              Acetylcholine
DISULFID
                                                                                                                                                                                                                                                                                   Rogers J.P., Luginbuhl P., Pemberton Stevens R.C.;
                                                      SEQUENCE
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Copyright (c) 1993 - 2003 Compugen Ltd.
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O9s133 escherichia
O9b04 homo sapien
O82932 escherichia
O9zgv1 escherichia
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O9br78 homo sapien
O9an40 bradyrhizob
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O64507 mus musculu
O9b5h2 homo sapien
O9bq83 homo sapien
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ALIGNMENTS

RES Q91 ID AC DT DT	Qy V	REST
RESULT 2 Q9BP56 PRELIMINARY; PRT; 61 AA. AC Q9BP56; PRELIMINARY; PRT; 61 AA. DT 01-JUN-2001 (TrEMBLrel. 17, Created) DT 01-JUN-2001 (TrEMBLrel. 17, Last sequence update) DT 01-DEC-2001 (TrEMBLrel. 19, Last annotation update)	Query Match 61.8%; Score 34; DB 5; Length 61; Best Local Similarity 33.3%; Pred. No. 9.8; Matches 5; Conservative 0; Mismatches 10; Indels 0; Gaps 0; 3 CCXXPXCXXXXXXC 17 1	RESULT 1 Q9BP57 PRELIMINARY; PRT; 61 AA. AC Q9BP57; DT 01-JUN-2001 (TrEMBLrel. 17, Last sequence update) DT 01-JUN-2001 (TrEMBLrel. 19, Last annotation update) DT 01-DEC-2001 (TrEMBLrel. 19, Last annotation update) DC Conotoxin scaffold I. OS Conus pennaceus (Feathered cone). OC Eukaryott; Metazoa; Mollusca; Gastropoda; Caenogastropoda; OC Neogastropoda; Conoidea; Conidae; Conus. OX NCBI_TaxID=37335; RI MEDLINE-21105969; PubMed-11158371; RP SEQUENCE FROM N.A. RA Conticello S.G., Gillad Y., Avidan N., Ben-Asher E., Levy Z., RA Fainzilber M.; RA Fainzilber M.; RA MCOLLIBER FOOLVing Hypervariability: The Case of Conopeptides."; RL MOLL Biol. Evol. 18:120-131(2001). DR HSSP; P50985; lAKG. SQ SEQUENCE 61 AA; 6363 MW; 42E0033324D66922 CRC64;

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01-JUN-2001 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
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                                                                                                                                 EMBL; AK014785;
                                                                                                                                              Nature 409:685-690(2001).
                                                                                                                                                          "Functional annotation of a full-length
                                                                                                                                                                           Wynshaw-Boris A., Yoshida
Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=C57BL/6J; TISSUE=HEAD; MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse).
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Neogastropoda; Conoidea; Coni
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                                                                                                                   P02876;
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          ; IPR001450; 4Fe4S_ferredoxin.; IPR001305; DnaJ_CXXCXGXG.; IPR001007; VWF_C.; IPR001007; VWF_C.; PS00198; 4Fe4S_FERREDOXIN; UNKNOWN_2. PS00198; DNAJ_CXXCXGXG; 1. PS01208; VWFC; UNKNOWN_1.
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Conoidea; Conidae; Conus.
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 B6A30BFB5E2AA31E CRC64;
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Mismatches
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Q9S133;
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01-MAY-2000 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
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                                                                                                                                               Plasmid pB171.
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Eukaryota; Metazoa; C
Mammalia; Eutheria; F
                  SEQUENCE
                            Plasmid
                                             "Complete DNA sequence and structural analysis Escherichia coli adherence factor plasmid."; Infect. Immun. 67:5455-5462(1999).
                                                                                                                                    Bacteria; Pu
Escherichia
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                                      EMBL; AB024946;
                                                                            Sasakawa C.
                                                                                      Tobe T
                                                                                              MEDLINE=99426847;
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                                                                                                                         NCBI_TaxID=562;
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                                                                                   Hayashi T.,
                                                                                                                                             Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                          560 AA;
                   113
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                  AA;
                                      BAA84867.1;
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                                                                                    PubMed=10496929;
T., Han C.G., Schoolnik G.K.,
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Primates;
                   13016 MW;
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33.3%;
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Pred. No.
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Pred. No.
Score
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                   1C41D5771CAB475F CRC64
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                                                                                                                                              Enterobacteriaceae;
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                                                                 of the enteropathogenic
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Length 113;
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01-NOV-1998
01-DEC-2001
                               Outbreak. DNA Res. 5
                                                                             MEDLINE-98290540; PubMed-9628576;
Makino K., Ishii K., Yasunaga T., Hattori M., Yokoyama K.,
Yutsudo H.C., Kubota Y., Yamaichi Y., Iida T., Yamamoto K.,
Han C.G., Ohtsubo E., Kasamatsu M., Hayashi T., Kuhara S.,
                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR002219; DAG_PE-bind.
Pfam; PF00130; DAG_PE-bind; 1.
SMART; SM00109; C1; 1.
PROSITE; PS50081; DAG_PE_BIND_DOM_2; 1.
SEQUENCE 152 AA; 16119 MW; 18403EEC734C2695 CRC64;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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01-MAR-2001 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
 SEQUENCE
            Plasmid
                      EMBL;
                                                   enterohemorrhagic
                                                                         Shinagawa H.;
                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                         NCBI_TaxID=83334;
                                                                                                                                                                    Bacteria; Proteobacteria; Escherichia.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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                                                  "Complete nucleotide sequences enterohemorrhagic Escherichia
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                    es. 5:1-9(1998).
AB011549; BAA31831.1; -.
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 154 AA;
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                                                                                                                                                                                                                                                                                                                                                                       Conservative
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 17879 MW;
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57.1%;
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Pred. No. 23;
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 AD87A5690D208279 CRC64;
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                                                   93-kb and 3.3-kb
1 0157:H7 derived
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Best Local S
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01-MAY-1999
01-MAY-1999
                 Pfam; PF
                                                                                                                          SEQUENCE FROM N.A.
MEDLINE=20184065; PubMed=10717238;
Shinmura K., Kohno T., Takeuchi-Sa
Kamo T., Sugimura H., Yokota J.;
"Expression of the OGG1-type la (n
                                                 and non-cancerous human cells.";
Int. J. Oncol. 16:701-707(2000).
EMBL, AB037879, BAB13294.1;
InterPro; IPR003265; Endo_3c.
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01-MAR-2001 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of Escherichia coli 0157:H7.";
Nucleic Acids Res. 26:4196-4204(1998).
EMBL; AF074613; AAC70083.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plasmid p0157.
Bacteria; Proteobacteria; gamma
Escherichia.
                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
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 SEQUENCE
                                                                                                                                                                                                                                                                                                 Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                   Q9HCR8;
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TYPE lE.
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Primates;
19492 MW;
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Pred. No.
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3634F234D8BD3457
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23;
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24;
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CRC64;
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Best Local :
               Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., Arakawa T., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., Salto T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Salto R., Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T., Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H. Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H. Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.
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01-JUN-2001
01-JUN-2002
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                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=SKIN;
MEDLINE=21085660; PubMed=11217851;
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Bacteria; Proteobacteria; alpha subdivision; Rhizobiaceae group;
Bradyrhizobium group; Bradyrhizobium.
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Mammalia; Eutheria;
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01-JUN-2001
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EMBL; AF322013; AAG60938.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=21101824; PubMed=11157954;
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1 (TrEMBLrel. 17,
2 (TrEMBLrel. 21,
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Chordata;
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Rodentia;
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  Hume D.A.,
Mazzarelli
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Best Local
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InterPro; IPR003267; Pro_rich.
InterPro; IPR003965; P_rich_extensn.
InterPro; IPR001007; VWF_C.
PRINTS; PR01217; PRICHEXTENSN.
PRINTS; PR00021; PRORICH.
PROSITE; PS01208; VWFC; UNKNOWN 1.
Q62220;
01-NOV-1996
01-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
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01-AUG-1999 (TrEMBLrel. 11, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      070613;
01-AUG-1998
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InterPro; IPR001450; 4Fe4S_ferredoxin.
InterPro; IPR001305; DnaJ_CXXII; UNKNOWN_3.
PROSITE; PS00198; 4FE4S_FERREDOXIN; UNKNOWN_3.
PROSITE; PS00637; DNAJ_CXXCXGXS; 3.
SEQUENCE 196 AA; 17777 MW; 2136738FD496D815 CRC64;
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Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.
Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                     Q62220
                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (Mouse).
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EMBL; AKCO20699; BAB32180.1; -.
HSSP; P10969; 1WGT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Karimpour
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                                                                                                                                                                                                                                     3 CCXXPXC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S49657; AAC08282.1;
S49654; AAC08282.1;
S49659; AAC08283.1;
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5; Conser
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197 AA;
(TrEMBLrel.
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                                                                        PRELIMINARY;
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ler M., Shih D.,
                                                                                                                                                                                                                                                                                                      60.0%;
57.1%;
                                                                                                                                                                                                                                                                                                                                                                            21036 MW;
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36 MW; 03B657A0F769D5B0 CRC64;
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Matches 5
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PROSITE;
PROSITE;
PROSITE;
                                                                     InterPro;
InterPro;
PROSITE; ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
Serine 1 ultra high sulfur protein.
KRTAP5-1.
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"Serine-rich ultra high sulfur protein gene expression in murine hair and skin during the hair cycle.";
J. Biol. Chem. 265:21375-21380(1990).
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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HSSP; P01064;
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InterPro; IPR001007; VWF_C.
PROSITE; PS00198; 4Fe4S_EBRREDOXIN; UNKNOWN_2.
PROSITE; PS01208; VWFC; UNKNOWN_2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGD; MGI:1354758; Krtap5-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-91154184; PubMed=1840598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-BALB/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=91065960; PubMed=2250030;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KRTAP5-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26 CCCVPVCSCSSCGGC 40
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCXXPXCXXXXXXXX 17
                                                                                                                                                                                                                                         M37759; AAA40106.1; -.
                                                                                                                                                                                                                  P01064; 1PI2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
5; Conserv
PS00198; 4FE4S_FERREDOXIN; UNKNOWN_1.
PS01177; ANAPHYLATOXIN_1; UNKNOWN_1.
PS00637; DNAJ_CXXCXGX; UNKNOWN_1.
PS01208; VWFC; UNKNOWN_3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ultra high sulfur protein.
                                                                                            IPR001450; 4Fe4S_ferredoxin.
IPR000020; Anaphylatoxin.
IPR001305; DnaJ_CXXCXGXG.
IPR001007; VWF_C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     223 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAA40107.1; ~.
                                                                                                                                                                                           Krtap5-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21442 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60.0%;
33.3%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; | Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
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                                                                                                                                                                                                                                                                                                                                          Vogeli G.
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                                                                                                                                                                                                                                                                                                                 gene
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; Murinae; Mus
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RESULT 15
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                                                                                                                                                     Kawakami T., Noguchi S., Itoh T., Shigeta K., Senba T., Matsumura K., Nakajima Y., Mizuno T., Morinaga M., Tanigami A., Fujiwara T., Ono T., Yamada K., Fujii Y., Ozaki K., Hirao M., Ohmori Y., Ota T., Suzuki Y., Obayashi M., Nishi T., Shibahara T., Tanaka T., Nakamura Y., Isogai T., Sugano S.;
"NEDO human cDNA sequencing project.";
Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AK027092; BAB15654.1;
InterPro: IPR000305; UYCC_N.
SMART; SM00465; GIYC; 1.
SEQUENCE 255 AA; 28175 MW; CCDC5C958B8C51BB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                       01-MAR-2001 (TYEMBLrel 16, Created)
01-MAR-2001 (TYEMBLrel 16, Last sequence update)
01-MAR-2002 (TYEMBLrel 20, Last annotation update)
CDNA: FLJ23439 fis, clone HSI00184.
                                                                                                                                                                                                                                                                                                           TISSUE=SMALL INTESTINE;
                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9H5H2
                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9H5H2;
                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9606;
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                                                                               3 CCXXPXCXXXXXXXC
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5; Conserv
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                                                                                                          Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
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                                                                                                                      60.0%;
33.3%;
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33.3%;
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Pred. No.
                                                                                                                     Score 33;
Pred. No.
                                                                                                        Mismatches
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27;
                                                                                                                                   DB 4;
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